ECLIPSES OF THE MOON IN INDIA

BY

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PREFACE

THE present volume has been prepared in continuation of the "Indian Calendar", which contained, *inter alia*, Tables drawn up by Dr. Robert Schram for determining questions connected with eclipses of the sun in India for a period of 1600 years. The eclipses of the moon are now dealt with, and a few notes added.

I desire to express my best thanks for their kind advice and assistance to Professor H. H. Turner, of Oxford, and Mr. A. C. D. Crommelin, of the Royal Observatory, Greenwich.

Pandit Śankara Bâlkṛishna Dîkshit, whose death early in the present year is greatly to be deplored, rendered valuable help by checking my figures.

June, 1898.

R. SEWELL.

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INTRODUCTION, RULES, AND EXAMPLES.

THE following Tables will be found to contain all that is necessary for the determination of the actual time of occurrence of eclipses of the moon for the period of sixteen hundred years, from A.D. 300 to 1900. The calculations in Table E. have been based on von Oppolzer's Canon der Finsternisse (Denkschriften der Mathematisch naturwissen schaftlichen classe der Kais. Akademie der Wissenschaften in Wien, Vol. LII., 1887). All eclipses are included, whether visible or invisible. Visibility at a given spot, if not apparent on the face of Table E., must be tested according to the rules hereinafter given.

The results obtained will be closely approximate, but are liable to small errors of a minute or two, owing to minor inequalities in the moon's motion which have been left out of account by Oppolzer. Table G. also is similarly liable to slight variations, for reasons which will be noted below. Absolute exactness is impossible under the circumstances, and it would be useless to attempt more than is given in this volume.

A comparison between the times fixed by Oppolzer's Canon and by the Nautical Almanacks since the year 1767 (see Table H.) will shew how even the most reliable authorities differ in their calculations.

A lunar eclipse is visible in the same degree on every part of the earth's surface which, during any part of its occurrence, is turned away from the sun and towards the moon—then at the full and on the other side of the earth; or, in other words and speaking broadly, on any meridian between the hours of sunset and sunrise. For Indian purposes, therefore, the calculations for these tables have been made for the meridian of Lanka (Ujjain), i.e. Greenwich East Longitude 75° 46′, and the necessary time-correction, 5 h. 3 m., has been applied to the Canon figures which were prepared for the meridian of Greenwich. All times are measured from mean sunrise at Lanka, taken as 6 A.M.

Von Oppolzer calculated every eclipse in apparent time; and then, for civil purposes, changed this to mean- or clock-time for the meridian of Greenwich by applying the daily equation of time. The tables in the present volume give similar mean time for the meridian of Lanka.

No account has been taken of the effect produced on the moon by the penumbra, but

the question remains doubtful, and in such case the actual visibility at any given spot must be ascertained.

For this purpose it is necessary (a) to alter the hour given in Table E. to suit the longitude of the given place; (b) to convert the mean time of the table into apparent (or true) time; (c) to find the moment of sunrise or sunset on the day and at the place in question.

- (a) The time-correction for longitude is plus one minute of time for every 15' of longitude east of, or greater than, the base meridian (75° 46'), and minus one minute of time for every 15' west of, or less than, the same. Four minutes of time to one degree of longitude.
- (b) Table F. gives the equation of time in minutes, for intervals of five days throughout the year for the period covered by the principal table. (If it is at any time desired to convert apparent time into mean time, this can be done by using the table with reversed signs.)
- (c) Table G., copied from Raper's Practice of Navigation Table 26, but with the days of the year added to the sun's declination in degrees in order to facilitate work, gives the hours and minutes of sunrise and sunset in different latitudes on different days. I have ventured to add the days of the year to this table, because there are no almanacks extant in India earlier than those of the last few decades to which reference can be made in order to ascertain the sun's declination on any given day. It is true that the inclusion of the days of the year introduces, in distant epochs, small errors due to various causes, such as the change in the obliquity of the ecliptic, and of the perihelion point of the earth's orbit. But the sum of these would not amount to much; and if the little Table given in Rule 5 below be used, which brings Old Style dates into harmony with the present Calendar, these slight variations in the sun's declination may well be left out of account.

Another variation is caused by the fact that, since the moon is actually at the full at mid-eclipse, she is not quite full at the beginning, and she is a little past the full at the end of the eclipse. For localities such as India, no part of which is very far distant from the equator, this variation, even in the extreme case of an eclipse prolonged to a duration of four hours, would not amount to more than four minutes.

If all these variations operated in one direction the time-difference so caused might of course amount to several minutes, but it often, indeed generally, happens that one cause of variation works against and helps to annul another. At the worst they only affect the question of the visibility at the last few moments of an eclipse ending when the moon is just rising, or the first few moments of an eclipse beginning when the moon is just setting; and since the difference is then compensated by the effects produced by refraction, it is not necessary to consider them. The beginning or ending of an eclipse cannot be generally observed nearer than one minute, and sometimes two or three minutes of time, even under the most favourable conditions.

I have thought it advisable to give a list of eclipses as fixed by the Nantical Almanack since A.D. 1767, the date of its first publication. These may be compared with the data obtained from Oppolzer's Canon. I have reduced the actual figures given in the Nantical Almanack to our requirements (1) by altering the hour to suit the Indian system, according to which the day begins at mean sunrise (6 A.M.) on the meridian of Lanka, (2) by applying the time-difference between the longitudes of Greenwich and Lanka, and, (3) up to the year 1834, by applying the daily equation of time. Since 1834 the Nautical Almanack figures are themselves given in

¹ Probably not more than half a degree, or two minutes of time, for two years differing as much as possible. (Professor Turner.)

It may be as well to point out that these Tables are applicable not only to India, but to all places in the world lying between N. Lat. 0° and 39°. To use them for mean or clock time for any part of the globe, it is only necessary to apply to the figures given in Table E. the time-difference for longitude (4 minutes to a degree) east or west of our base-meridian, which is, as stated, 75° 46′ east of Greenwich. This gives the hour of eclipse by the clock on any meridian in latitude 0°. For apparent time Table F. is applicable to all parts of the world. To find the hour of sunset or sunrise Table G. may be used for any place between the equator and N. Lat. 39°.

RULES, AND USE OF TABLES.

Rule I. Note the details regarding the eclipse given in Table E.

On any date and for any place in India the eclipse was invisible if it occurred altogether between 1.51 and 9.22.

If its beginning or ending overstep these limits the eclipse may have been visible at some place in India. In such case it must be examined.

Rule II. In case an examination is necessary take the latitude and longitude of the place in question. Table XI. of the "Indian Calendar" (p. exix) may be used, or a reliable map.

Rule III. Correct Table E. for longitude, thus;—Lanka longitude, or the longitude of the base meridian of the Tables, being 75° 46′ east of Greenwich, add one minute of time for every 15′ of longitude east of this, and deduct one minute of time for every 15′ of longitude west of it.

Rule IV. To find the apparent or true time of eclipse, apply to the figures given in E., the correction noted in Table F.

Rule V. Then consider the latitude of the place. The moment of the occurrence of the different phases of the eclipse will remain unaffected, but the visibility of the eclipse depends on the time of sunrise or sunset in this locality, and this varies with the latitude.

Table G. gives these hours of sunrise and sunset. But for Old Style dates a correction is necessary, which is supplied by the little Table below. It must be borne in mind that this

A.D.												
				i	1	Λ.υ.	<u> </u>	1			1	
500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700
1	2	3	3	4	5	6	6	7	8	9	9	10

alteration of date is solely for use of Table G., the English date of eclipse remaining unaffected. Where necessary, therefore, add to the day given in Table E. the number of days noted in this sub-Table, and then use Table G. to ascertain the duration of daylight on the day of eclipse at the latitude in question.

EXAMPLES.

- 1. Eclipse of December 2, 1750. This began at 3 h. 32 m. after 6 A.M. and ended at 7 h. 16 m. It was therefore invisible in any part of India.
- 2. Eclipse of February 28, 1896. I select this because it can be tested by a reliable almanack. How was it at Madras? Work with Table H. It began at 17.19 and ended at 20.18. Nearly ¹¹/₁₈ths. of the disc were obsenred.

Rule I. It was visible, clearly, in some part of India.

Rule III. Madras E. Long. 80° 13' 30" or + 18 m. of time. Apply this, and we have for the beginning 17.37, and for the ending 20.36. This corresponds with the entry in the Madras Asylum Press Almanack, viz., 11.37 P.M. on 28th, and 2.36 A.M. on 29th February.

There is no need to apply Rules IV. or V.

3. Eclipse of November 13, A.D. 300. How was it at Śrinagar in Kashmir?

It was total and ended at Lańka at 12.21 (Table E.) or 6 h. 21 m. P.M. Correct to apparent time (Table F.) (6 h. 21 m. + 17 m. =) 6 h. 38 m. P.M. Totality ended (11 h. 15 m. + 17 m. =) 11 h. 32 m., or 5 h. 32 m. P.M., apparent time. At Lańka therefore the eclipse was visible for only the last 38 m. of partial obscuration, sunset being at 6.0 P.M. But at Śrinagar (N. Lat. 34° 6′, E. Long. 74° 52′—see the "Indian Calendar" Table NI.—) the case was different. Correct for longitude. 75° .46′— 74° .52′ = 54° = 4 minutes of time. 6 h. 38 m.—4 m. = 6 h. 34 m. This then was the moment of the end of the eclipse. But the sun set (Table G.) at 5 h. 8 m. P.M., so that the eclipse was visible at Śrinagar for an hour and twenty-six minutes after sunset. Totality ended at [5 h. 32 m. P.M.—4 m. (Long.) = [5 h. 28 m. P.M., so that at Śrinagar the eclipse was total for twenty minutes after sunset.

4. Eclipse of November 25, A.D. 364. This began at Lanka 23.8, or 5 h. 8 m. A.M., mean time on 26th (civil reckoning); + 10 m. for apparent time (Table F.), 5 h. 18 m. A.M. It was therefore visible at Lanka for 42 m. before sunrise. But at Rangoon (Long: 96° 17′, diff. + 1 h. 22 m.) the celipse began at apparent time, 6 h. 40 m. A.M., while (Table G.) the sun rose (Lat. 16° 46′) at 6 h. 27 m. A.M. Here the eclipse was invisible.

ADDITIONS TO THE "INDIAN CALENDAR."

NUMERALS EXPRESSED BY WORDS.

DATES in Indian inscriptions are often expressed by words, each word representing a numeral, and selected for that purpose according to its meaning. Thus, bhû or chandra stood for the figure 1, since all the world knows that there is only one earth or one moon. Similarly paksha "wing", or akshi "eye", conveyed at once the idea of two; trijagat, the "three worlds", three; Pâṇḍava, five; avatâra, ten; and so on. Extending the system with considerable ingenuity, a large number of figures were represented.

The commoner words are given in the enclosed list; which contains, first, the words given by Burnell (Br.) in his South-Indian Palæography, including those mentioned by Al-Birûni and C. P. Brown, then those added by Dr. Bühler (Bh.) (Grundriss der Indo-Arischen Philologie und Altertumskunde, Indische Palæographie, pp. 80, 81), lastly some supplied to me by Professor Kielhorn. (K.)

Units are generally written first, then tens, hundreds, and thousands. Thus Rishi-naga-kh-endu-sanvatsara is the year 1087, guna-sastra-kh-endu-ganita sanvatsara is 1063. 7 8 0 1

- o. (*Br.*) Abhra, âkâśa, ambara, ananta, gagaṇa, kha, śûnya, viyat, vyoman. (*K.*) Dyu, nabhas, vindu, Vishnupada.
- I. (Br.) Âdi, bhû, chandra, dharâ, dharanî, indu, kshiti, kshmâ, nâyaka, pitâmaha, prithivî, raśmi, rûpa, śaśânka, śaśin, śîtâmśu, soma, tanu, urvarâ, vasudhâ. (Bh.) Mâhî, Sitaraśmi. (K.) Atrinayanaja, avani, chandramas, dhâtrî, jagatî, kshapeśvara, kshaunî, kshonî, ku, mrigânka, sudhâmśu, vasumatî, vidhu.
- 2. (Br.) Akshi, Aśvin, bâhu, Dasra, drishţi, kara, karna, kuţumba, lochana, netra, paksha, ravichandrau, Yama, yamala. (Bh.) Nayana. (K.) Chakshus.
- 3. (Br.) Agni, dahana, guṇa, hutâśana, jvalana, loka, pâvaka, Râma, sahodara, śikhin, tapana, tri, trigata, triguṇa, trijagat, trikâla, trilochana, trinetra, vahni, vaiśvânara. (Bh.) Hotri. (K.) Anala, Haranayana, śakti, udarchis, veda, vishṭapa.
- 4. (Br.) Abdhi, bandhu, dadhi (?), diś, jalanidhi, jalâśaya, koshtha, krita, sâgara, samudra, udadhi, veda, yuga. (Bh.) Aya or âya, śruti, jala, jaladhi. (K.) Ambhôdhi, ambudhi, amburâśi, arṇava, Chaturânanavadana, vanadhi, vâridhi, vârindhi, sindhu.
- $5 \cdot (Br)$ Artha, bhûta, indriya, ishu, kalamba, mârgaṇa, Pâṇḍava, prâṇa, putra, ratna, śara, sâyaka, suta, tata, vâṇa, visikha: (Bh) Bâṇa, vishaya. (K) Tryakshamukha.

- 6. (Br.) Anga, ari, darśana, mâsârdha, mata, râga, rasa, ritu, śastra, tarka. (Bh.) Káya.
- 7. (Br.) Adri, aga, aśva, Atri, chhandas, dhâtu, kalatra, mahîdhara, muni, naga, parvata, rishi, śaila, svara. (Bh.) Dhî. (K.) Giri, haya, loka, pâtâla, sagara, sâgara, turamgama.
- 8. (Br.) Ahi, bhûtî, dantin, gaja, ibha, mangala, nâga, sarpa, vasu. (Bh.) Anushṭubh, siddhi. (K.) Mûrti, naga, tanu.
- 9. (Br.) Anka, antara, chhidra, dvâra, go, graha, nanda, nidhi, pavana, randhra. (K.) Crahagana, nidhâna.
 - 10. (Br.) Âśâ, avatâra, diś, karman, Râvaṇaśiras.
 - 11. (Br.) Akshauliinî, Îśvara, lâbha, Mahâdeva, Rudra. (Bh.) Îśa, Śiva. (K.) Bhava.
 - 12. (Br.) Aditya, arka, bhânu, mâsa, sahasrâinsu, sûrya, vyaya. (K.) Dyumani.
 - 13. (Br.) Kâma, Kâmadeva, Manmatha, viśva. (Bh.) Aghosha, atijagatî.
 - 14. (Br.) Indra, Manu, loka. (K.) Amarendra, pûrva, ratna.
 - 15. (Br.) Ahan, paksha, tithi.
 - 16. (Er.) Ashți, bhûpa, kalâ, nripa.
 - 17. (Br.) Atyashti.
 - 18. (Br.) Dhriti.
 - 19. (Br.) Atidhriti.
 - 20. (Br.) Kriti, nakha.
 - 21. (Br.) Svarga, utkriti.
 - 22. (Br.) Jäti.
 - 24. (Br.) Jina.
 - 25. (Br.) Tattva.
 - z6. (Br.) Utkriti.

The following are said to occur only in documents of late date. (Br.)

- 27. (Br.) Nakshatra. (Bh.) Bhasamûha.
- 32. (Br.) Danta, Rada.
- 33. (Br.) Deva. (Bh.) sura.
- 34. (Br.) Tâna.
- 40. (Br.) Naraka.
- 49. (Br.) Tâna.

NUMERALS EXPRESSED BY LETTERS OR SYLLABLES.

[Dr. Burnell's South-Indian Palaeography pp. 65, 79; 80, from which most of this note is taken; Dr. Bühler's Grundriss der Indo-Arischen Philologie und Altertumskunde, Indische Palaeographie, pp. 82, 83; Indian Antiquary, II, pp. 361-2.]

A system of notation by which numerals are expressed by letters of the alphabet is often called the *Katipayâdi* method, from *katipaya*, "a certain number", "so many".

Three systems are known.

A. The system of Aryabhatta, which he used in his treatises on astronomy, but which does not appear to have been adopted by any other writer, or in inscriptions. It is unnecessary to go into this. Professor Kern has edited Aryabhatta's text.

B. The chronogram system. This seems to have originated in Southern India, and has been constantly used in Malabar, Travancore, and the South Tamil country. According to it the consonants of the Sanskrit alphabet have values given to them, thus:—

k 1	kh 2	. g 3	gh 4	<u>n</u> 5		chh 7		j 8	jh 9	ñ
ţ I	ţh 2	3 .	ḍh 4	ņ 5	t 6	th 7		d 8	dh 9	n O
	÷		1	2	b 3	4	m 5	ĩ.	1	
	y I	r 2		v 4	s 5		s 7	n 8	! 9	

When double letters are used, the last pronounced consonant only counts. The order of the numbers is from right to left; thus Vishnu = 54; $Badhn\hat{a}ti$ annamsasarpi = 17,750,603.

By this system dates may be expressed in words having a connected meaning, and it closely resembles the Semitic system so often used by the Muhammadans. It is also used in Southern India as a memoria technica for the contents of the Vedas.

Burnell states that the oldest use of it with which he was acquainted was in Shadguru-sishya's commentary on the Rigveda Anukramanika (1187 A.D.). It is also used as an aid to remember the rules for calculating horoscopes, and for astronomical tables.

- C. The letter systems. There are several of these, mostly used for marking the pages and palm-leaves of MSS. They are in use in Burmah and Ceylon as well as in India.
- (a) According to one system the consonants, with the short a vowel added to each, are used in order for representing the numerals I to 34; then the series is repeated with long \hat{a} , giving numbers to 68; and so on with the twelve vowels. The series runs—ka, kha, ga, gha,

vowels to each consonant and enables the series to run as far as $(16 \times 34 =) 544$. This results, of course, in the letters having a different value from those of the former system; e.g., $k\hat{a}$ in the first (a) system = 35, in the second (b) system = 2.

Dr. Bühler states that in Siam and Ceylon there are instances of this last system being prolonged, after the exhaustion of all the syllables ending with lah (= 408 or 544 as the case may be), by a repetition of the whole system; noted as 2 ka, $2 k\hat{a}$, $2 k\hat{i}$, etc. which would enable numerals to be represented to any extent.

These methods are convenient as numerals for arranging papers or pages in order, but are manifestly useless for simple notation. Thus, if a loose page is picked up bearing the syllable $m\hat{u}$, it can at once be put in its proper place; but no one could say without reference to a table what actual number $m\hat{u}$ represents.

Numbers in India are often abridged, as in England. We say for instance of the pages of a book "21-2", "243-4". This must not be lost sight of, even in the matter of inscriptions and their dates, remembering that in Europe there is sometimes a similar abbreviation. People speak of the year "ninety-eight", meaning "1798".

There is a system in use in Nepâl and amongst the Jains of N. India where syllables are used in an apparently arbitrary manner, but it is not known in the south. Dr. Burnell treats of this in his "South-Indian Paleography" (p. 65). The series is used for numbering pages of books, but I am not aware whether it has ever been employed for chronological purposes.

DETERMINATION OF NAKSHATRAS AND YOGAS.

[See Ind. Calendar, Arts. 133, 158, 159, pp. 64-65, 97-98.]

Dr. Schram proposes, in the *Indian Antiquary* for October 1896 (pp. 287—288), a simplification of the method employed by us for the determination of *nakshatras* and *yogas*.

He gives the following table by which (n), the nakshatra-index, and (y) the yoga-index may be found at once from the figures for (t) and (c); thus (n) = (t) + (s). Take down (t), and find (s) from the table given below, by observing the figure given for (c). In the example given by us in Art. 158 we have (t) = 1463, (c) = 439. From the first column of the following table, observing the difference between consecutive values of (s) (cols. 2, 3) and using the auxiliary table, (s) is found to be 1559. Add (t) to (s) and we have 3022 = (n). (y) = (s) + (n) (Art. 133), and both these quantities are found from the table.

This table may be styled Table VII A of the "Indian Calendar". It is reprinted by kind permission of the author, and of the editor of the "Indian Antiquary".

<i>*</i>	· · ·	_ ,			TAI	BLE V	II A.			 		
Arg.	s. Diff.		Arg.	5.	Diff.	·	Arg.	8,	Diff.	Arg.	s:	Diff.
	5. Diff. 7147 103 7250 104 7354 104 7458 104 7666 103 7769 103 7976 103 8079 103 8182 103 8285 103 8285 103 8388 103 8491 102 8593 103 8696 102 8798 102 8798 102 9103 101 9204 101 9305			\$. 9707 9807 9907 6 105 204 303 401 500 598 693 793 891 988 1085 1182 1279 1376 1473 1569 1666 1762	Diff. 100 100 99 99 99 98 99 98 97 97 97 97 97 97			2147 2243 2330 2435 2531 2628 2724 2821 2917 3014 3111 3208 3303 3402 3500 3598 3695 3794 3892 3990 4089 4188	Diff. 96 96 96 97 96 97 97 97 97 97 97 97 98 98 98 98		5. 4586 4686 4787 4887 4988 5089 5190 5292 5394 5495 5598 5700 5802 5905 6008 6111 6214 6317 6421 6524 6628 6731	Diff. 100 101 100 101 101 101 102 102 103 103 103 103 103 104 103 104 103
220 230 240 250	9406 101 9507 100 9607 100 9707		470 480 490 500	1858 1954 2050 2147	96 96 96 97		720 730 740 750	4287 4387 4486 4586	99 100 99 100	970 980 990 1000	6835 6939 7048 7147	104 104 104 104

AUXILIARY TABLE.

Dir.			L	ast fign	re of Ar	gument	c.		
of	1	2	3	4	5	6	7	8	9
···					Add.			~	
104	. 10	21	31	42	52	62	73	83	94
103	. 10	21	31	41	52	62	72	82	93
102	. 10	20	31	41	51	61	71	82	92
101	10	20	30	40	51	61	71	81	91
100	10	20	30	40	50	60	70	80	90
99	10	20	30	40	50	59	69	79	89
- 08	. 10	20	29	39	49	59	69	78	88
97	. 10	19	29	39	49	58	68	78	87
30	10	19	29	38	48	58	67	77	86

ADDITION TO THE "INDIAN CALENDAR" TABLE I.

The commencement of the luni-solar year (cols. 19 to 25) throughout Table I of the "Indian Calendar" was calculated for the system of true intercalations of months (cols. 8 to 12). The use of the mean system of intercalations (cols. 8a to 12a) will, in years following those where an intercalation has taken place by the mean system but not by the true system, throw the initial date a month later than that given in cols. 19 to 25. In such years the invariable intercalation of a month by the true system, when none takes place by the mean system, brings the initial dates under both systems together again in the third year. The following is a list of initial dates (cols. 19 to 25) to be substituted for the present entries in Table I in the years mentioned, when the mean system of intercalation of months (cols. 8a to 12a) is used.

The figures already given in Table I, however, may equally well be used if care is taken to remember the number of the month. Thus—suppose that it is necessary to ascertain a date in Chaitra of Kali 3412, where the mean system of intercalations was used. Noting that the month was called "Vaiśâkha I" under the "true" system, the calculation may be made for Vaiśâkha I, using the figures already given in Table I.

	NCURRENT EAR.	III.	COMMENCEMENT OF Civil day of Chait			YEAR.		
				Moon	's age.			
Kali.	A. D.	Day and Month A. D.	Week day.	Lunat. parts elapsed. (L)	Tithis elapsed.	a.	i.	с.
1	5	19	20	21	22	23	24	25
3412	310-11	18 Mar. (77)	0 Sat	58	·174	52	795	282
3431	329-30	18 Mar. (77)	3 Tues	180	.540	157	659	282
3450	*348-49	17 Mar. (77)	5 Thur	78	.234	9924	486	279
3458	*356-57	19 Mar. (79)	3 Tues	141	•423	84	602	285
3477	375-76	19 Mar. (78)	5 Thur	52	•156	9851	430	282
3496	394-95	19 Mar. (78)	1 Sun	232	.696	9956	293	282
3515	413-14	19 Mar. (78)	4 Wed	319	.957	62	157	283
3526	*424-25	17 Mar. (77)	2 Mon	69	.207	8	904	278
3534	*432-33	19 Mar. (79)	0 Sat	327	•981	168	20	283
3553	451-52	20 Mar. (79)	3 Tues	320	•960	273	884	283
3572	470-71	19 Mar. (78)	5 Thur	45	•135	40	711	281
3580	478-79	21 Mar. (80)	3 Tues	218	·654	200	828	286
3591	489-90	19 Mar. (78)	1 Sun	223	.669	146	575	281
3599	497-98	21 Mar. (80)	6 Fri	318	.954	306	691	286
3618	*516-17	20 Mar. (80)	1 Sun	196	·588	72	519	284
3637	535-36	20 Mar. (79)	3 Tues	95	·285	9839	346	281
3656	554-55	20 Mar. (79)	6 Fri	222	.666	9945	210	281
3675	573-74	20 Mar. (79)	2 Mon	250	.750	51	73	282
3694	*592-93	20 Mar. (80)	5 Thur	243	·729	156	937	282
3702	*600-1	21 Mar. (81)	2 Mon	133	.399	9977	17	284

1	NCURRENT YEAR.	111.	COMMENCEMENT OF (Civil day of Chai			YEAR.		
Kali.	A. D.	Day and Month A. D.	Week day.	Lunat. parts elapsed. (t.)	Tithis Ga	a.	<i>д</i> .	c.
1	5	19	20	21	22	23	24	25
3713	611-12	21 Mar. (80)	1 Sun	270	·810	262	800	282
3721	619-20	22 Mar. (81)	5 Thur.	129	•387	83	881	285
3732	630-31	20 Mar. (79)	3 Tues	69	-207	29	628	279
3740	638-39	22 Mar. (81)	1 Sun	190	.570	189	744	285
3759	657-58	21 Mar. (80)	8 Tues	37	•111	9956	571	282
3778	*676-77	21 Mar. (81)	6 Fri	258 .	.774	61	435	282
3797	695-96	21 Mar. (80)	1 Sun	109	.327	9828	262	280
3816	714-15	21 Mar. (80)	4 Wed	175	•525	9934	126	280
. 3835	733-34	21 Mar. (80)	0 Sat	170	•510	39	989	280
3843	741-42	22 Mar. (81)	4 Wed	61	·183	9860	70	283
3854	*752-53	21 Mar. (81)	3 Tues	175	.525	145	853	281
3862	*760-61	22 Mar. (82)	0 Sat	49	.147	9966	933	283
3873	771-72	22 Mar. (81)	6 Fri	254	.762	250	717	281
3881	7 79-80	23 Mar. (82)	3 Tucs	79	.237	72	797	283
3900	798-99	23 Mar. (82)	6 Fri	200	.000	177	660	284
3919	817-18	22 Mar. (81)	1 Sun	76	.288	9944	488	281
3938	*836-37	22 Mar. (82)	4 Wed	303	.000	50	351	281
3957	855-50	22 Mar. (81)	6 Fri	85	.255	9817	179	279
3965	863-64	24 Mar. (83)	4 Wed	252	.756	9977	295	284
3976	874-75	22 Mar. (81)	2 Mon	100	.300	9922	42	279
3984	882-83	23 Mar. (82)	6 Fri	⊙–19	 ·57	9743	122	282
3995	893-94	22 Mar. (81)	5 Thur	91	273	28	906	279
4003	901-2	23 Mar. (82)	2 Mon	⊙-23	69	9849	986	282
4014	*912-13	22 Mar. (82)	1 Sun	136	•408	134	769	280
4022	*920-21	23 Mar. (83)	5 Thur	⊙–17	— -51	9955	850	282
4041	939-40	24 Mar. (83)	1 San	65	•195	60	713	282
4060	958-59	24 Mar. (83)	4 Wed	241	.723	166	577	283
4079	977-78	23 Mar. (82)	6 Fri	160	·480	9933	404	280
4098	*996-97	23 Mar. (83)	2 Mon	318	•954	38	268	280
4106	*1004-5	24 Mar. (84)	6 Fri	115	.345	9860	348	283
4117	1015-16	23 Mar. (82)	4 Wcd	25	.75	9805	95	278
4125	1023-24	25 Mar. (84)	2 Mon	242	•726	9965	211	283
4136	1035-35	23 Mar. (82)	0 Sat	15	•45	9911	958	278
4144	1042-43	25 Mar. (84)	5 Thur	276	•828	71	75	283
4155	1053-54	23 Mar. (82)	3 Tues	32	.96	17	822	278
4163	1061-62	25 Mar. (84)	1 Sun	264	.792	176	939	283
4182	*1080-81	25 Mar. (85)	4 Wed	290	·870	282	802	284
4201	1099-1100	25 Mar. (84)	6 Fri	89	267	49	629	281

[⊙] Sec Text, Art. 101 above, para. 2.



1.70	Hindu Month	Time		from Laúl en as 6 A		unrise,	Number of
A. D.	and	Greatest	Begiu-	1	od of curation.	End	twelfths eclipsed.
Year, Montb, and Day.	Current Śaka Year.	[i.c. mo- ment of	ning of Eclipse.	Begin-	End.	of Eelipse.	{"t."=total
and Day.	["w.m.i." = with mean intercalations.]	fallmoon] h. m.	h. 1n.	ning.	h. m.	h. m.	celipso.]
1	2	3	4	5	6	7	8
300 . May 20 Mon. 300 Nov. 13 Wed. 301 May 9 Fri. 301 Nov. 3 Mon. 303 Mar. 19 Fri.	Jyeshtha. 223 Mûrgasîrsha. 223 Jyeshtha. 224 Kûrttika, (w. m. i.) Mûrgasîrsha. 224 Chaitra. 226	9 56 10 34 10 41 1 3 20 52	8 5 8 47 9 44 0 42 19 6	9 6 9 53 — 20 16	10 46 11 15 — 21 28	11 47 12 21 11 38 1 24 22 38	t. t. 3·1 0·4 t.
303 Sept. 12 Sun. 304 Mar. 8 Wed. 304 Ang. 31 Thur. 305 Aug. 21 Tucs. 306 July 12 Fri.	Âsvina 226 Chaitra 227 Bhûdrapada, (w. m. i.) Bhûdrapada II 227 Bhûdrapada 228 Śrâvaṇa 229	18 13 13 28 19 50 4 27 12 8	16 34 11 43 18 3 4 4 11 4	18 6 12 54 19 10	18 20 14 2 20 30 —	19 52 15 13 21 37 ·4 50 13 12	t. t. t. 0·5 4·0
307 Jan. 5 Sun. 307 July 2 Wed. 307 Dec. 25 Thur 308 June 20 Suu. 308 Dec. 14 Tues.	Mâgha. 229 Âshâḍha. 230 Pausha. 230 Âshâḍha. 231 Pausha. 231	15 40 4 30 18 52 15 58 5 16	13 56 2 39 17 7 14 34 4 55	15 9 3 40 18 18 —	16 11 5 20 19 26	17 24 6 21 20 37 17 22 5 37	t. t. t. 7·6 0·4
310 Apr. 30 Sun. 310 Oct. 24 Tues. 311 Apr. 19 Thur. 311 Oct. 14 Sun. 312 Apr. 8 Tues.	Vaiśâkha II, (vo. m. i.) Vaiśâkha. 233 Kârttika. 234 Vaiśâkha. 234 Kârttika. 234 Vaiśâkha. 235	7 2 23 8 14 37 6 10 4 47	5 31 21 24 12 47 4 24 3 57	22 38 13 50 5 34	$egin{array}{cccccccccccccccccccccccccccccccccccc$	8 33 24 52 16 27 7 56 5 37	9·2 t. t. t. 2·4
313 Feb. 27 Fri. 314 Feb. 16 Tues. 314 Aug. 12 Thur. 315 Feb. 6 Sun. 315 Aug. 1 Mon.	Phâlguna. 235 Phûlguna. 236 Bhâdrapada. 237 Phûlguna. 237 Śrâvaṇa. 238	12 56 24 46 3 29 5 20 19 27	12 17 22 59 1 43 3 41 17 42	24 4 2 54 — — 18 54	25 28 4 4 - 20 0	13 35 26 33 5 15 6 59 21 12	1·4 t. t. 11·9 t.
317 June 11 Tues. 317 Dec. 5 Thur. 318 May 31 Sat. 318 Nov. 24 Mon. 319 May 20 Wed.	Âshâdha 240 Pausha 240 Jyeshtha 241 Mârgaśirsha 241 Jyeshtha 242	13 35 3 56 16 18 19 29 17 14	12 19 2 11 14 26 17 42 16 4	3 22 15 26 18 48	4 30 17 10 20 10	14 51 5 41 18 10 21 16 18 24	C·0 t. t. t. 4·8
319 Nov. 14 Sat. 321 Mar. 30 Thur. 321 Sept. 22 Fri. 322 Mar. 19 Mon. 322 Sept. 12 Wed.	Mûrgasîrsha 242 Chaitra 244 Âśvina 244 Chaitra 245 Âśvina 245	9 43 4 48 25 33 21 27 3 19	$\begin{array}{cccc} 9 & 20 \\ 3 & 4 \\ 23 & 56 \\ 19 & 41 \\ 1 & 31 \end{array}$	4 17 - 20 49 2 36	5 19 22 5 4 2	10 6 6 32 27 10 23 13 5 7	0;5 t. 11:3 t. t.
323 Sept. 1 Sun. 324 July 22 Wed. 325 Jan. 15 Fri. 325 July 12 Mon. 326 Jan. 5 Wed.	Bhâdrapada, (w. m. i.) Bhâdrapada II. 246 Śrâvaṇa. 247 Mâgha. 248 Mâgha. 248	12 17 19 43 23 35 11 51 3 14	11 37 18 51 21 52 10 1 1 29	23 7 11 3 2 39	24 3 12 39 3 49	12 57 20 35 25 18 13 41 4 59	1·5 2·6 t. t. t.
326 July 1 Fri. 326 Dec. 25 Sun. 328 May 10 Fri. 323 Nov. 4 Mon. 329 Apr. 29 Tues.	Âshâdha 249 Pausha 249 Jyeshtha 251 Mûrgaśirsha 251 Vaiśâkha II, (w. m. i.) Vaiśâkha 252	22 53 14 4 13 48 7 40 21 55	21 22 13 38 12 24 5 57 20 4	- - 7 14 21 5	- 8 6 22 45	24 24 14 30 15 12 9 23 23 46	9·2 0·6 7·6 t. t.
329 Oct. 24 Fri. 330 Apr. 19 Sun. 331 Mar. 10 Wed. 332 Feb. 28 Mon. 332 Aug. 22 Tues.	Kârttika 252 Vaiśâkha 253 Chaitra 254 Phâlguna 254 Bhâdrapada 255	14 15 12 27 21 1 8 40 11 18	12 29 11 25 20 38 6 54 9 35	13 38 — 8 2 10 50	14 52 9 18 11 46	16 1 13 29 21 24 10 26 13 1	t. 3·8 0·5 t. t.

	Hindu Month	Time	measared tak	from Land en as 6 A.		nnrise,	Number of
A. D. Year, Month,	and	Greatest phase.	Begin-	1	od of	End	twelfths eelipsed.
and Day.	Current Śaka Year.	[i.e. mo- ment of fullmoon	ning of Eclipse.	Begin- ning.	End.	of Eclipse.	["t."=total
	["w.m.i." = with mean intercalations.]	h. m.	h. m.	h. m.	h. m.	h. m.	eclipse.]
11	2	3	4	5	6	7	8
333 Feb. 16 Fri. 333 Aug. 12 Sun. 335 June 22 Sun. 335 Dec. 16 Tues. 336 June 10 Thur.	Phûlgnna. 255 Bhâdrapada 256 Âshûdha 258 Pausha 258 Ashûdha 259	12 59 3 17 20 18 12 51 22 40	11 . 19 1 30 19 13 11 6 20 49	12 43 2 38 	13 15 3 56 ————————————————————————————————————	14 39 5 4 •21 23 14 36 24 31	t. t. 4·1 t. t.
336 Dec. 5 Sun. 337 May 30 Mon. 337 Nov. 24 Thur. 339 Apr. 10 Tucs. 339 Oct. 4 Thur.	Pausha. 259 Jyeshtha II, (w. m. i.) Jyeshtha. 260 Mûrgasîrsha. 260 Vaiśâkha. 262 Âśvina II, (w. m. i.) Kârttika. 262	4 25 23 46 18 27 12 36 9 8	2 38 22 25 18 6 10 54 7 33	3 44 — 12 14 —	5 6 — — 12 58 —	6 12 25 7 18 48 14 18 10 43	t. - 7·0 0·4 t. 10·6
340 Mar. 30 Snn. 340 Sept. 22 Mou. 341 Sept. 11 Fri. 342 Aug. 3 Tues. 343 Jan. 27 Thur.	Chaitra. 263 Aśvina. 263 Aśvina. 264 Śrâvaṇa II, (w. m. i.) Bhâdrapada I. 265 Mâgha. 265	5 22 11 6 20 17 3 29 7 32	3 34 9 16 19 26 2 50 5 50	4 40 10 20 — 7 8	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	7 10 12 56 21 8 4 8 9 14	t. t. 2·5 1·4 t.
343 July 23 Sat. 344 Jan. 16 Mon. 344 July 12 Thur. 345 Jan. 4 Fri. 346 May 21 Wed.	Śrâvana 266 Mâgha 266 Śrâvana 267 Mâgha 267 Jyeshṭha 269	19 17 11 38 5 51 22 48 20 31	17 28 9 52 4 15 22 22 19 16	18 34 11 2 — —	20 0 12 14 — —	21 6 13 24 7 27 23 14 21 46	t. t. 11·0 0·6 . 5·8
346 Nov. 15 Sat. 347 May 11 Mon. 347 Nov. 4 Wed. 348 Apr. 29 Fri. 350 Mar. 10 Sat.	Mûrgasîrsha 269 Jyeshtha 270 Mûrgasîrsha 270 Vaisâkha 271 Chaitra 273	16 12 5 10 22 22 20 4 16 25	14 30 3 18 20 36 18 51 14 40	15 48 4 19 21 44 — 15 51	16 36 6 1 23 0 — 16 59	17 54 7 2 24 8 21 17 18 10	t. t. t. 5·4 t.
350 Sept. 2 Sun. 351 Feb. 27 Wed. 351 Aug. 23 Fri. 352 Aug. 12 Wed. 353 July 3 Sat.	Bhâdrapada II, (w. m. i.) Âśviua I. 273 Phâlgana. 273 Bhûdrapada. 274 Bhâdrapada. 275 Âshâḍha II. 276	19 13 20 27 11 15 3 27 3 2	17 32 18 44 9 27 3 1 2 14	18 54 20 2 10 32 —	19 32 20 52 11 58 —	20 54 22 10 13 3 .3 53 3 50	t. t. t. 0·6 2·2
353 Dec. 26 Sun. 354 June 22 Wed. 354 Dec. 16 Fri. 355 June 11 Sun. 355 Dec. 6 Wed.	Pausha. 276 Âshâḍha 277 Pausha. 277 Âshâḍha. 278 Pausha. 278	21 41 5 4 13 21 6 20 3 10	19 56 3 14 11 34 4 51 2 49	21 8 4 16 12 40 —	22 14 5 52 14 2 —	23 26 6 54 15 8 7 49 3 31	. t. t. t. 8·7 . 0·4
357 Apr. 20 Sun. 357 Oct. 14 Tucs. 358 Apr. 10 Fri. 358 Oct. 3 Sat. 359 Mar. 31 Wed.	Vniśâkha 280 Kûrttika 280 Vaiśâkha 281 Âśvina II, (w. m. i.) Kûrttika 281 Chaitra 282	20 20 16 50 13 8 19 1 2 11	18 42 15 17 11 18 17 11 1 50	12 21 18 14	13 55 19 48	21 58 18 23 14 58 20 51 .2 32	11.6 10.1 t. t. 0.4
359 Sept. 23 Thur. 361 Feb. 6 Tues. 361 Aug. 3 Fri. 362 Jan. 26 Sat. 362 July 23 Tues.	Aśvina. 282 Phâlguna. 283 Śrâvaṇa, (w. m i.) Śrâvaṇa II 284 Mâgha. 284 Śrâvaṇa 285	4 23 15 14 2 47 19 54 12 51	3 25 13 33 1 .1 18 8 11 11	14 54 2 9 19 16 12 39	15 34 3 25 20 32 13 3	5 21 16 55 4 33 21 40 14 31	3·2 t. t. t.
363 Jan. 16 Thur. 364 June 1 Tues. 364 Nov. 25 Thur. 365 May 21 Sat. 365 Nov. 15 Tues.	Mâgha. 285 Jyeshtha II, (w.m.i.) Jyeshtha. 287 Mârgaśîrsha. 287 Jyeshtha. 288 Mârgaśîrsha. 288	7 31 3 12 24 50 12 21 6 30	7 0 2 8 23 8 10 29 4 44	24 26 11 29 5 52	25 14 13 13 7 8	8 2 4 16 26 32 14 13 .8 16	. 0·9 4·0 t. . t. . t.

	Hindu Month	Tim	e j	measured take	from Lanlen as 6 A.	tá mean si . M.	anrise,	Number of
A. D. Year, Month,	and	Greates		Begin-	Perio	od of	End	twelfths celipsed.
and Day.	Current Śaka Year.	[i.e. mo ment of fallmoor	f	ning of L Eclipse.	Begin- ning.	End.	of Eclipse.	["t."=total
	["w.m.i." = with mean intercalations.]	h. m.		h. m.	h. m.	h. m.	h. m.	eclipso.]
1	2	3	_	4	5	6	7	8
366 May 11 Thur. 366 Nov. 4 Sat. 368 Mar. 20 Thur. 368 Sept. 13 Sat. 369 Mar. 10 Tues.	Jyeshtha 289 Mårgaširsha 289 Chaitra 291 Ásvina 291 Chaitra 292	3 32 6 15 23 53 3 21 3 44		2 12 6 0 22 10 1 42 1 59	23 28 - 3 10	24 18 - 4 18	4 52 6 30 25 36 5 0 5 29	6·9 0·2 t. 11·9 . t.
369 Sept. 2 Wed. 370 Aug. 23 Mon. 371 July 14 Thur. 372 Jan. 7 Sat. 372 July 2 Mon.	Bhâdrapada, (w. m. i.) Aśvina I 292 Bhâdrapada. 293 Śrâvana. 294 Mâgha. 294 Âshâḍlia II, (w. m. i.) Âshâḍha. 295	19 18 11 12 9 48 6 31 11 30		17 28 10 29 9 27 4 47 9 42	18 32 5 59 10 47	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	21 8 11 55 10 9 8 15 13 18	t. 1·7 0·4 t. t.
372 Dec. 26 Wed. 373 June 21 Fri. 373 Dec. 16 Mon. 375 May 2 Sat. 375 Oct. 25 Sun.	Pausha. 295 Âshâdha 296 Pausha 296 Vaiśâkha II, (w. m. i.) Vaiśâkha 298 Kârttika 298	22 14 12 55 11 53 3 59 24 40		20 27 11 20 11 32 2 26 23 8	21 32	22 56 — — —	24 1 14 30 12 14 5 32 26 12	t. 10·7 0·4 10·0 9·7
376 Apr. 20 Wed. 376 Oct. 14 Fri. 377 Apr. 10 Mon. 377 Oct. 3 Tues. 379 Feb. 17 Sun.	Vaišākha. 299 Kārttika. 299 Vaišākha. 300 Āśvina, (w. m. i.) Kārttika. 300 Phâlguna. 301	20 45 2 58 9 35 12 39 22 53		18 55 1 8 8 53 11 36 21 14	19 56 2 9 — 22 46	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	22 35 4 48 10 17 13 42 24 32	t. t. 1.6 3.9 t.
379 Aug. 14 Wed. 380 Feb. 7 Fri. 380 Aug. 2 Sun. 381 Jan. 26 Tucs. 382 June 12 Sun.	Bhàdrapada. 302 Phâlguna. 302 Śrâvaṇa, (w. m. i.) Śrâvaṇa II. 303 Mâgha. 303 Âshâdha. 305	10 23 4 2 19 47 16 6 9 52	2	8 39 2 15 18 3 15 28 9 4	9 52 3 22 19 18 —	10 54 4 42 20 16	12 7 5 49 21 31 16 44 10 40	t. t. 1·3 2·2
382 Dec. 7 Wed. 383 June 1 Thur. 383 Nov. 26 Sun. 384 May 21 Tues. 384 Nov. 14 Thur.	Pausha. 305 Jycshtha II, (w. m. i.) Jyeshtha 306 Mârgaśirsha 306 Jycshtha 307 Mârgaśirsha 307	9 24 19 34 14 41 11 4 14 14		7 42 17 43 12 54 9 36 13 53	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	9 45 20 24 15 20 —	11 6 21 25 16 28 12 32 14 35	t. t. t. 8.5 0.4
386 Apr. 1 Wed. 386 Sept. 24 Thur. 387 Mar. 21 Sun. 387 Sept. 14 Tues. 388 Sept. 2 Sat.	Chaitra 309 Âśvina 309 Chaitra 310 Âśvina 310 Bhâdrapada, (w. m. i.) Âśvina I 311	7 18 11 38 10 52 3 29 19 5		5 38 10 1 9 5 1 39 18 14	7 8 10 13 2 41 	7 28 11 31 4 17	8 58 13 15 12 39 5 19 19 56	t. 11·2 t. t. . 2·5
390 Jan. 17 Thur. 390 July 13 Sat. 391 Jan. 7 Tues. 391 July 2 Wed. 391 Dec. 27 Sat.	Mâgha. 312 Śrâvaṇa. 313 Mâgha. 313 Âshadha II, (w. m. i.) Âshâdha. 314 Pausha. 314	15 16 18 1 7 4 19 38 20 31	l 1 3	13 32 16 16 5 16 17 57 20 13	14 45 17 26 6 22 19 19	15 47 18 36 7 46 19 57	17 0 19 46 8 52 21 19 20 49	t. t. t. 0·3
393 May 12 Thur. 393 Nov. 5 Sat. 394 May 2 Tues. 394 Oct. 25 Wed. 395 Apr. 21 Sat.	Jyeshtha 316 Mârgaśirsha 316 Vaiśâkha, 1I (w. m. i.) Vaiśâkha 317 Kârttika 317 Vaiśâkha 318	11 31 8 39 4 18 11 12 16 50	3	10 2 7 8 2 26 9 22 15 53	3 27 10 23	5 9 12 1	13 0 10 10 6 10 13 2 17 47	8·7. 9·4 t. t. 3·1
395 Oct. 14 Sun. 397 Feb. 28 Sat. 397 Aug. 24 Mon. 398 Feb. 17 Wed. 398 Aug. 14 Sat.	Kârttika 318 Phâlguna 319 Bhâdrapada 320 Phâlguna 320 Bhâdrapada 321		6	20 2 4 43 16 23 10 18 1 12	17 45 11 24 2 21	18 23 12 48 3 35	22 12 .7 57 19 45 13 54 .4 44	4·2 11·4 t. t. t.

	. Hindu Month	Time		from Lańk n as 6 A.		ınrisc,	Number of
. A.D.	and	Greatest phase.	Begin-	Perio total obs		End	twelfths
Year, Month, and Day.	Current Śaka Yem.	[i.c. mo- ment of full moon]	ning of Eclipse.	Begin-	End.	of Eclipse.	celipsed. ["t."=total
and Day.	["w.m.i." = with mean intercalations.]	h. m	h. m.	h. m.	h. m.	h. m.	cclipse.]
1	2	3	4	. 5	<u></u>		8
399 Feb. 6 Sun. 400 June 22 Fri. 400 Dec. 17 Mon. 401 June 12 Wed. 401 Dec. 6 Fri.	Phûlguna. 321 Âshûdha 323 Pausha 323 Âshûdha 324 Pausha 324	24 37 16 38 17 58 2 49 22 51	23 54 16 15 16 17 0 58 21 4	$ \begin{array}{c cccc} & - & \\ & 17 & 38 \\ & 2 & 0 \\ & 22 & 11 \end{array} $	18 18 3 36 23 31	25 20 17 1 19 39 4 38 24 38	1·7 0·5 t. t. t.
402 June 1 Sun. 402 Nov. 25 Tues. 404 Apr. 11 Mon. 404 Oct. 4 Tues. 405 Mar 31 Fri.	Jycshtha II, (w. m. i.) Jycshtha. 325 Margaširsha. 325 Vnišākha. 327 Kārttika I, (w. m. i.) Kārttika. 327 Chaitra. 328	18 32 22 14 14 32 19 59 17 50	16 58 21 48 12 56 18 23 16 1	17 6	18 34	20 6 22 40 16 8 21 35 19 39	10·3 0·6 10·9 10·9 t.
405 Sept. 24 Sun. 406 Mar. 20 Tucs. 406 Sept. 14 Fri. 408 Jan. 28 Tucs. 408 July 23 Thur.	Âśvina. 328 Chaitra. 329 Âśvina. 329 Mâgha. 330 Śrâvaṇa. 331	11 53 17 59 3 6 23 52 24 31	10 3 17 26 2 7 22 8 22 49	11 4 - 23 23 23 8	12 42 ———————————————————————————————————	13 43 18 32 4 5 25 36 26 13	f. 1·0 3·4 t. t.
409 Jan. 17 Sun. 409 July 13 Tues. 410 Jan. 7 Fri. 411 May 23 Tues. 411 Nov. 16 Thur.	Mâgha 331 Śrâvaṇa 332 Mâgha 332 Jyeshṭḥa 334 Mârgaśirsha 334	15 49 2 21 5 7 19 5 16 40	14 1 0 36 4 46 17 44 15 10	15 7 1 48 — —	16 31 2 54 —	17 37 4 6 5 28 20 26 18 10	t. t. 0·4 .7·1 9·1
412 May 12 Sun. 412 Nov. 4 Mon. 413 May 1 Thur. 413 Oct. 25 Sat. 415 Mar. 11 Thur.	Jyeshtha 335 Margasırsha 335 Vaisakha II, (w. m. i.) Vaisakha 336 Karttika 336 Chaitra 338	11 43 19 29 23 55 5 41 13 48	9 51 17 39 22 48 4 32 12 14	10 51 18 40 — —	12 35 20 18 — —	13 35 21 19 25 2 6 50 15 22	t. t. 4.5 4.7 10.3
415 Sept. 5 Sun. 416 Feb. 28 Mon. 416 Aug. 24 Thur. 417 Feb. 17 Sat. 418 Dec. 29 Sun.	Bhâdrapada II, (w. m. i.) Âśviua. 338 Phâlguna. 339 Bhâdrapada. 339 Phâlguna. 339 Pausha. 341	1 51 20 3 10 9 9 3 2 34	0 13 18 14 8 21 8 13 0 53	19 18 9 27 - 2 14	20 48 10 51 2 54	3 29 21 52 11 57 9 53 4 15	11·7 t. t. 2·4 t.
419 June 23 Mon. 419 Dec. 18 Thur. 420 June 12 Sat. 420 Dec. 6 Mon. 422 Apr. 22 Sat.	Âsbûdha 342 Pausha 342 Âshûdha 343 Pausha 343 Vaisâkha 345	10 1 7 4 2 0 6 19 21 35	8 12 5 17 0 21 5 49 20 4	9 17 6 24 — —	10 45 7 44 — —	11 50 S 51 3 39 6 49 23 6	t. t. 11·9 0·8 9·2
422 Oct. 16 Mon. 423 Apr. 11 Wed. 423 Oct. 5 Fri. 424 Mar. 31 Mon. 424 Sept. 24 Wed.	Kârttika 345 Vaiśâkha 346 Âśvina II, (w. m. i.) Kârttika 346 Chaitra II, (w. m. i.) Chaitra 317 Âśvina 347	4 30 24 38 20 22 0 59 11 17	2 56 22 48 18 31 0 9 10 13	23 50 19 32 —	25 26 21 12 —	6 4 26 28 22 13 1 49 12 21	10·3 t. t. 2·4 4·0
426 Feb. 8 Mon. 426 Aug. 4 Wed. 427 Jan. 28 Fri. 427 July 24 Sun. 428 Jan. 18 Wed.	Phâlguna 348 Śrâvaṇa II, (w. m. i.) Bhâdrapada I. 349 Mâgha 349 Śrâvaṇa 350 Mâgha 350	8 24 7 14 24 27 9 12 13 38	6 41 5 36 22 38 7 25 13 17	7 57 23 43 8 32	8 51 	10 7 8 52 26 16 10 59 13 59	t. 11·6 t. t. 0·4
428 July 12 Thur. 429 June 3 Mon. 429 Nov. 26 Tues. 430 May 23 Fri. 430 Nov. 16 Sun.	Srâvana. 351 Jyeshtha II. 352 Mârgaśirsha 352 Jyeshtha 353 Mârgaśirsha 353	17 58 2 33 24 46 19 6 3 53	17 14	- - 18 15 3 4	19 57 4 42	18 9 3 46 26 16 20 58 5 43	

	Hindu Month	Time	measured	from Land en as 5 A	ka mean si		Number of
A. D. Year, Month,	and	Greatest phase.	Begin-	Peri	od of scuration.	Eud	twelfths
	Current Śaka Year.	[i.e. mo- ment of	ning of Eclipse.	Begin-	End.	of Eelipse.	eclipsed.
and Day.	["w.m.i." = with mean intercalations.]	fullmoon]	h. m.	h. m.	h. in.	h. m.	["t."= total eclipse.]
1	2	3	4	5	6	7	8
431 May 13 Wed. 431 Nov. 5 Thur. 433 Mar. 21 Tues. 433 Sept. 15 Fri. 434 Mar. 11 Sun.	Jycshtha 354 Mûrgaśirsha 354 Chaitra 356 Áśvina 356 Chaitra 357	6 56 14 19 20 58 9 45 3 50	5 40 13 9 19 27 8 10 2 0	- - 3 2		8 12 15 29 22 29 11 20 5 40	6·0 · 4·9 9·3 10·8 t.
434 Sept. 4 Tues. 435 Feb. 28 Thur. 435 Aug. 24 Sat. 437 Jan. 8 Fri. 437 July 3 Sat.	Bhâdrapada 11, (w. m. i.) Âśvina	17 27 17 16 18 49 10 58 17 17	15 37 16 18 18 18 9 17 15 31	16 41 10 41 16 40	18 13 ————————————————————————————————————	19 17 18 14 19 20 12 39 19 3	t. 3·2 0·9 t. t.
437 Dec. 28 Tues. 438 June 23 Thur. 438 Dec. 17 Sat. 440 May 3 Fri. 440 Oct. 26 Sat.	Pausha 360 Âshâḍha 361 Pausha 361 Jyeshtha I, (w.m.i.) Vaiśâkha 363 Kârttika 363	15 13 9 30 14 22 4 33 13 8	13 26 7 47 13 51 3 10 11 34	14 33 9 4 — —	15 53 9 56 — —	17 0 11 13 14 53 5 56 14 42	. t. · t. 0·9 7·5 · 10·2
441 Apr. 22 Tues. 441 Oct. 16 Thur. 442 Apr. 11 Sat. 442 Oct. 5 Mon. 444 Feb. 19 Sat.	Vaiśákha 364 Kârttika 364 Vaiśákha 365 Áśvina, (w. m. i) Kârttika 365 Phálguna 366	7 20 4 55 7 53 19 36 16 53	5 29 3 4 6 51 18 30 15 11	6 30 4 5 — — 16 30	8 10 5 45 — 17 16	9 11 6 46 8 55 20 42 18 35	t. t. 3·8 4·3 t.
444 Aug. 14 Mon. 445 Fcb. 8 Thur. 445 Aug. 3 Fri. 446 Jan. 28 Mon. 446 July 21 Wed.	Bhàdrapada. 367 Phâlguna. 367 Śrâvana II, (w. m. i.) Bhâdrapada I. 368 Mâgha. 368 Śrâvana. 369	14 2 9 0 16 11 22 3 1 20	12 29 7 11 14 21 21 37 0 38	8 15 15 25 —	9 45 16 57 —	15 35 10 49 18 1 22 29 2 2	10·1 t. t. 0·6 1·6.
447 June 14 Sat. 447 Dec. 8 Mon. 448 June 3 Thur. 448 Nov. 26 Fri. 449 May 23 Mon.	Âshâdha 370 Pausha 370 Jycshtha II, (w. m. i.) Jyeshtha 371 Mârgasîrsha 371 Jycshtha 372	10 1 8 52 2 27 12 21 13 55	8 58 7 22 0 36 10 31 12 31	1 37 11 32 —	3 17 13 10 —	11 4 10 22 4 18 14 11 15 19	3·9 8·9 t. t. 7·7
449 Nov. 15 Tues. 451 Apr. 2 Mon. 451 Sept. 26 Wed. 452 Mar. 21 Fri. 452 Sept. 14 Sun.	Mârgaśîrsha 372 Vaiśâkha I, (w. m. i.) Chaitra 374 Âśvina 374 Chaitra 375 Âśvina 375	23 1 4 5 17 48 11 32 24 58	21 50 2 38 16 15 9 42 23 8	10 43 24 10	- - 12 21 25 46	24 12 5 32 19 21 13 22 26 48	5·0 8·2 10·0 t. t.
453 Mar. 11 Wed. 453 Sept. 4 Fri. 455 Jan. 19 Wed. 455 July 14 Thur. 456 Jan. 8 Sun.	Chaitra. 376 Bhâdrapada II, (w. m. i.) Âśvina. 376 Mâgha. 377 Śrâvaṇa. 378 Mâgha. 378	1 23 1 55 19 20 24 43 23 16	0 18 1 9 17 40 22 59 21 29	19 8 24 13 22 35	 19 32 25 13 23 57	2 28 2 41 21 0 26 27 25 3	4·1 2·0 t. t. t.
456 July 3 Tucs. 456 Dec. 27 Thur. 458 May 14 Wed. 458 Nov. 6 Thur. 459 May 3 Sun.	Ashâḍha II 379 Pausha 379 Jyeshṭha 381 Mârgaśirsha 381 Jyeshṭha 1, (w. m. i.) Vaiśâkha 382	17. 1 22 28 11 21 21 53 13 55	15 15 21 57 10 7 20 20 12 3	16 25 — — — 13 3	17 37 — — — 14 47	18 47 22 59 12 35 23 26 15 47	t. 0·9 5·7 9·9 t.
459 Oct. 27 Tues. 460 Apr. 21 Thur. 460 Oct. 16 Sun. 462 Mar. 1 Thur. 462 Aug. 25 Sat.	Kârttika 382 Vaiśákha 383 Kârttika 383 Phâlguna 384 Bhâdrapada 385	13 33 14 40 3 57 25 8 21 1	11 42 13 27 2 48 23 28 19 32	12 43 — — 24 58 —	14 23 — — 25 18 —	15 24 15 53 5 6 26 48 22 30	t. 5·5 4·7 t. 8·7

4.70	Hindu Month	Time	mensured take	from Laúk n as 6 A.		unrise,	Number of
, A.D.	aud	Greatest pliase.	Begin-	Perio	od of	End	twelfths
Year, Month,	Current Śaka Year.	[i.e.mo- ment of	ning of Eclipse.	Begin-	End.	of Eclipse.	celipsed.
and Day.	[" $w.m.i.$ " \rightleftharpoons with mean intercalations]	fullmoon] h. in	h. m.	ning.	lı, m.	h. m.	["t." = total eclipse.]
1	2	3	4	5	в	7	8
399 Feb. 6 Sun. 400 June 22 Fri. 400 Dec. 17 Mon. 401 June 12 Wed. 401 Dec. 6 Fri.	Phâlguna 321 Âshâḍha 323 Pausha 323 Âshâḍha 324 Pausha 324	24 37 16 38 17 58 2 48 22 51	23 54 16 15 16 17 0 58 21 4	$\begin{array}{cccc} & - & \\ - & \\ 17 & 38 \\ 2 & 0 \\ 22 & 11 \end{array}$	18 18 3 36 23 31	25 20 17 1 19 39 4 38 24 38	1·7 0·5 t. t.
402 June 1 Sun. 402 Nov. 25 Tues. 404 Apr. 11 Mon. 404 Oct. 4 Tues. 405 Mar 31 Fri.	Jycshtha II, (w. m. i.) Jycshtha. 325 Mârgaśirsha. 325 Vniśâkha. 327 Kârttika I, (w. m. i.) Kârttika. 327 Chaitra. 328	18 32 22 14 14 32 19 59 17 50	16 58 21 48 12 56 18 23 16 1		18 34	20 6 22 40 16 8 21 35 19 39	10·3 0·6 10·9 10·9 t.
405 Sept. 24 Sun. 406 Mar. 20 Tues. 406 Sept. 14 Fri. 408 Jan. 28 Tues. 408 July 23 Thur.	Âśvina. 328 Chaitra 329 Âśvina. 329 Mâgha. 330 Śrâvaṇa. 331	11 53 17 59 3 6 23 52 24 31	10 3 17 26 2 7 22 8 22 49	11 4 - 23 23 23 8	12 42 ———————————————————————————————————	13 43 18 32 4 5 25 36 26 13	t. 1·0 3·4 t. t.
409 Jan. 17 Sun. 409 July 13 Tues. 410 Jan. 7 Fri. 411 May 23 Tues. 411 Nov. 16 Thur.	Mûgha 331 Śrâvaṇa 332 Mûgha 332 Jyeshṭḥa 334 Mûrgaśirsha 334	15 49 2 21 5 7 19 5 16 40	14 1 0 36 4 46 17 44 15 10	15 7 1 48 — — —	16 31 2 54 — — —	17 37 4 6 5 28 20 26 18 10	t. t. 0·4 7·1 9·1
412 May 12 San. 412 Nov. 4 Mon. 413 May 1 Thur, 413 Oct. 25 Sat. 415 Mar. 11 Thur.	Jycshtha 335 Margasirsha 335 Vaisakha II, (w. m. i.) Vaisakha 336 Karttika 336 Chaitra 338	11 43 19 29 23 55 5 41 13 48	9 51 17 39 22 48 4 32 12 14	10 51 18 40 — —	12 35 20 18 — — —	13 35 21 19 25 2 6 50 15 22	t. t. 4·5 4·7 10·3
415 Sept. 5 Sun. 416 Feb. 28 Mon. 416 Aug. 24 Thur. 417 Feb. 17 Sat. 418 Dec. 29 Sun.	Bhâdrapada II, (w. m. i.) Âśvina. 338 Phâlguna. 339 Bhâdrapada. 339 Phâlguna. 339 Pausha. 341	1 51 20 3 10 9 9 3 2 34	0 13 18 14 8 21 8 13 0 53	19 18 9 27 - 2 14	20 48 10 51 - 2 54	3 29 21 52 11 57 9 53 4 I5	11·7 t. t. 2·4 t.
419 June 23 Mon. 419 Dec. 18 Thur. 420 June 12 Sat. 420 Dec. 6 Mon. 422 Apr. 22 Sat.	Âshâḍha 342 Pausha 342 Âshâḍha 343 Pausha 343 Vaiśâkha 345	10 1 7 4 2 0 6 19 21 35	8 12 5 17 0 21 5 49 20 4	9 17 6 24 — — —	10 45 7 44 — —	11 50 8 51 3 39 6 49 23 6	t. t. 11.9 0.8 9.2
422 Oct. 16 Mon. 423 Apr. 11 Wed. 423 Oct. 5 Fri. 424 Mar. 31 Mon. 424 Sept. 24 Wed.	Kârttika 345 Vaiśâkha 346 Âśvina 11, (w. m. i.) Kârttika 346 Chaitra II, (w. m. i.) Chaitra 347 Âśvina 317	$\begin{array}{c cccc} 4 & 30 \\ 24 & 38 \\ 20 & 22 \\ 0 & 59 \\ 11 & 17 \end{array}$	2 56 22 48 18 31 0 9 10 13	23 50 19 32 —	25 26 21 12 —	6 4 26 28 22 13 1 49 12 21	10·3 t. t. 2·4 4·0
426 Feb. 8 Mon. 426 Aug. 4 Wcd. 427 Jan. 28 Fri. 427 July 24 Sun. 428 Jan. 18 Wed.	Phâlgana 348 Śrâvaṇa 1I, (w. m. i.) Bhâdrapada I. 349 Mâgha. 349 Śrâvaṇa. 350 Mâgha. 350	8 24 7 14 24 27 9 12 13 38	6 41 5 36 22 38 7 25 13 17	7 57 23 43 8 32 	8 51 25 11 9 52 	10 7 8 52 26 16 10 59 13 59	t. 11·6 · t. · t. 0·4
428 July 12 Thur. 429 June 3 Mon. 429 Nov. 26 Tues. 430 May 23 Fri. 430 Nov. 16 Sun.	Srâvaṇa 351 Jyeshtha II 352 Mârgaśirsha 352 Jyeshtha 353 Mârgaśirsha 353	17 5S 2 33 24 46 19 6 3 53	17 47 1 20 23 16 17 14 2 3	18 15 3 4	19 57 4 42	18 9 3 46 26 16 20 58 5 43	0·1 5·5 9·1 t. t.

	Hindu Month	Time		from Land on as & A		anrier,	Number of
A. D. Year, Month,	and	Greatest plase.	Regin	Peri	ol of curation.	Lind	tarifihe rclipert.
and Day.	Current Šaka Year.	(i.e. mo- ment of full moon)	ning of Eclipse.	Begin-	End.	of Deliper,	["f."= tital
•	{"w, m, i." == with mean intercolations.]	h. in.	h. in.	h. m.	h. m.	h. ni	eclipse]
1	2	3	4	5	- 6	7	8
431 May 13 Wed. 431 Nov. 5 Thur. 433 Mar. 21 Tues. 433 Sept. 15 Fri. 434 Mar. 11 Sun.	Jyeshtha 354 Margaśirsha 354 Chaitra 356 Aśvina 356 Chaitra 357	6 56 14 19 20 58 9 45 8 50	5 40 13 9 19 27 8 10 2 0	3 2	4 38	8 12 15 20 22 20 11 20 5 40	6+0 4-9 0+3 10+8 t.
434 Sept. 4 Tues. 435 Feb. 25 Thur. 435 Aug. 24 Sat. 437 Jan. 8 Fri. 437 July 3 Sat.	Bhàdrapada II, (ic. m. i.) Âśvina 357 Phálguna 357 Bhádrapada 358 Mūgha 359 À shôdha II 360	17 27 17 16 18 49 10 58 17 17	15 37 16 18 18 18 9 17 15 31	16 41 10 41 16 40	15 13 — — 11 15 17 51	19 17 18 14 19 20 12 30 19 3	· t. 3·2 0·0 t. t.
437 Dec. 28 Turs. 438 June 23 Thur. 438 Dec. 17 Sat. 440 May 3 Fri. 440 Oct. 26 Sat.	Pansha. 360 Åshådha 361 Pausha. 361 Jyeshtha 1, (v. m. i.) Vaisåkha 363 Kårttika 363	15 13 9 30 14 22 4 33 13 8	13 26 7 47 13 51 3 10 11 31	14 33 9 4 — —	15 53 9 56 — —	17 0 11 13 14 53 5 56 14 42	t. t. 0 9 7 5 10 2
441 Apr. 22 Tues. 441 Oct. 16 Thur. 442 Apr. 11 Sat. 442 Oct. 5 Man. 444 Feb. 19 Sat.	Vaiśákha. 364 Kárttika. 364 Vaiśákha. 365 Áśvina, (w. m. i) Kárttika. 365 Phâlguna. 366	7 20 4 55 7 53 19 36 16 53	5 29 3 4 6 51 18 30 15 11	6 30 4 5 — 16 30	8 10 5 45 17 16	9 11 6 46 8 55 20 42 18 35	t. t. 3+8 4+3 t.
444 Aug. 14 Mon. 445 Peb. 8 Thur. 415 Aug. 3 Fri. 446 Jau. 28 Mon. 446 July 24 Weil.	Bhàdrapada	14 2 9 0 16 11 22 3 1 20	12 29 7 11 14 21 21 37 0 38	8 15 15 25 —	9 45 16 57	15 35 10 49 18 1 22 29 2 2	10:1 t. t. 0:6 1:6
417 June 14 Saf. 447 Dec. 8 Mon. 448 June 3 Thur. 448 Nov. 26 Fri. 419 May 23 Mon.	Âshûdha 370 Pausha 370 Jyeshtha 11, (w. m. i.) Jyeshtha 371 Mûrgasîrsha 371 Jyeshtha 372	10 1 8 52 2 27 12 21 13 55	8 58 7 22 0 36 10 31 12 31	1 37 11 32	3 17 13 10	11 4 10 22 4 18 14 11 15 19	3·9 8·9 t. t. 7·7
449 Nov. 15 Tucs. 451 Apr. 2 Mon. 451 Sept. 26 Wed. 452 Mar. 21 Fri. 452 Sept. 14 Sun.	Múrga-Sirsha 372 Vaisákha I, (w. m. i.) Chaitra 374 Ásvina 374 Chaitra 375 Ásvina 375	23 1 4 5 17 45 11 32 24 58	21 50 2 38 16 15 9 42 23 8	- - 10 43 24 10	12 21 25 46	24 12 5 32 19 21 13 22 26 48	5 · 0 8 · 2 10 · 0 t. t.
453 Mar. 11 Wed. 453 Sept. 4 Pri. 455 Jan. 19 Wed. 455 July 14 Thur. 456 Jan. 8 Sun.	Chaitra 376 Bhádrapada II, (w. m. i.) Ásvina 376 Mágha 377 Srávana 378 Mágha 378	1 23 1 55 19 20 21 43 23 16	0 18 1 9 17 40 22 50 21 29	19 8 24 13 22 35	19 32 25 13 23 57	2 28 2 41 21 0 26 27 25 3	4·1 2·0 t. t. t.
456 July 3 Tues, 456 Dec. 27 Thur, 458 May 14 Wed, 458 Nov. 6 Thur, 459 May 3 Sun.	Ashâdha 11 379 Pausha 379 Jyeshtha 381 Mârgaśirsha 381 Jyeshtha 1, (10, 10, 1) Vaiśākha 382	17 1 22 25 11 21 21 53 13 55	15 15 21 57 10 7 20 20 12 3	16 25	17 37 — — 11 47	18 47 22 59 12 35 23 26 15 47	t. 0:9 5:7 9:9 t.
459 Oct. 27 Tues. 460 Apr. 21 Thur. 460 Oct. 16 Sun. 462 Mar. 1 Thur. 462 Aug. 25 Sat.	Kârttika 382 Vaišikha 383 Kârttika 383 Phâlgura 384 Bhâdrapada 385	13 53 14 40 3 57 25 8 21 1	11 42 13 27 2 48 23 28 19 32	12 43 — 24 58	14 23 — 25 15 —	15 24 15 58 5 6 26 48 22 50	5:5 4:7 5:7

A, D.	Hindu Month	Time		from Laúk en as 6 A		unrisc,	Number of
A. D. Year, Month,	and	Greatest phase,	Begin-	Perio	od of	End	twelfths celipsed.
and Day.	Current Śaka Year.	[i.c. mo- ment of	ning of Eclipse.	Begin- ning.	End.	of Eclipse.	["t."= total
unu Day.	[" $w.m.i.$ " = with mean intercalations.]	fullmoon) h. m.	lı. m.	h. m.	h. m.	h. 1n.	oclipse.]
1	2	3	4	5	<u>в,</u>	7	8
463 Feb. 19 Tues. 463 Aug. 14 Wed. 464 Feh. 9 Sun. 464 Aug. 3 Mon. 465 June 24 Thur.	Phâlguna. 385 Bhâdrapada. 386 Phâlguna. 386 Śrâvaṇa II, (w. m. i.) Bhâdrapada I. 387 Ashâḍha. 388	17 22 23 22 6 14 8 52 17 27	15 32 21 32 5 41 7 55 16 39	16 36 22 33 — — —	18 8 24 11 — — —	19 12 25 12 6 47 9 49 18 15	t. t. 1·0 3·1 2·2
465 Dec. 18 Sat. 466 June 14 Tucs. 466 Dec. 7 Wed. 467 June 3 Sat. 467 Nov. 27 Mon.	Pausha 388 Âshâḍba 389 Pausha 389 Jycshtha II, (w. m. i.) Jyeshtha 390 Mârgaśirsha 390	17 0 9 40 20 51 20 43 7 55	15 30 7 50 19 0 19 12 6 43	8 53 20 1	10 27 21 41 —	18 30 11 30 22 42 22 14 9 7	8·9 t. t. 9·4 5·2
469 Apr. 12 Sat. 469 Oct. 7 Tucs. 470 Apr. 1 Wcd. 470 Sept. 26 Sat. 471 Mar. 22 Mou.	Vaiśâkha. 392 Kârttika. 392 Vaiśâkha I, (w.m.i.) Chuitra. 393 Áśvina 393 Chaitra. 394	11 7 1 58 19 8 8 34 9 26	9 47 0 27 17 16 6 44 8 15	18 17 7 45 —	19 59 9 23 —	12 27 3 29 21 0 10 24 10 37	6·8 9·4 t. t. 5·0
471 Scpt. 15 Wcd. 473 Jan. 30 Tucs. 473 July 25 Wcd. 474 Jan. 19 Sat. 474 July 14 Sun.	Aśvina 394 Mûgha 395 Śrâvaṇa 396 Mûgha 396 Śrâvaṇa 397	9 8 3 35 8 16 7 14 24 35	8 12 1 56 6 35 5 26 22 47	3 35 7 57 6 32 23 52	3 35 8 35 7 56 25 18	10 4 5 14 9 57 9 2 26 23	3·0 t. t. t. t.
475 Jan. 8 Wed. 475 July 4 Fri. 476 May 24 Mon. 476 Nov. 17 Wcd. 477 May 13 Fri.	Mågha 397 Ashådha II 398 Jyesbtha 399 Mårgasirsha 399 Jyeshtha 400	6 20 17 16 18 8 6 43 20 24	5 42 17 1 17 6 5 11 18 33	19 34	21 14	6 58 17 31 19 10 8 15 22 15	1·3 0·2 3·7 9·8 t.
477 Nov. 6 Sun. 478 May 2 Tues. 478 Oct. 27 Fri. 480 Mar. 12 Wcd. 480 Sept. 5 Fri.	Mûrgaśîrsha 400 Jyeshtha I, (w. m. i.) Vaiśâkha. 401 Kârttika. 401 Chaitra. 403 Âśvina I, (w. m. i.) Âśvina. 403	22 24 21 27 12 20 9 21 4 8	20 33 20 5 11 10 7 44 2 44	21 34	23 14	24 15 22 49 13 30 10 58 5 32	t. 7·2 4·9 11·4 7·6
481 Mar. 1 Sun. 481 Aug. 25 Tucs. 482 Feb. 19 Fri. 482 Aug. 14 Sat. 483 July 6 Wed.	Phâlguna. 403 Bhâdrapada 404 Phâlguna. 404 Bhâdrapada. 405 Śrâvaṇa I. 406	25 40 6 40 14 20 16 32 1 0	23 50 4 49 13 40 15 24 0 32	24 52 5 50 — — —	26 28 7 30 — — —	27 30 8 31 15 0 17 40 1 28	t. t. 1·5 4·6 0·7
483 Dec. 29 Thur. 484 June 24 Snn. 484 Dec. 18 Tues. 485 June 14 Fri. 485 Dec. 7 Sat.	Pausha 406 Âshâdha 407 Pausha 407 Âshâdha 408 Pausha 408	25 9 16 58 5 25 3 33 16 46	23 39 15 10 3 34 1 56 15 35	16 16 4 35 —	17 40 6 15 —	26 39 18 46 7 16 .5 10 17 57	8·9 t. t. 11·2 5·1
487 Apr. 23 Thur. 487 Oct. 18 Snn. 488 Apr. 12 Tues. 488 Oct. 6 Thur. 489 Apr. 1 Sat.	Vaiśâkha 410 Kârttika 410 Vaiśâkha 411 Kârttika I, (w. m. i.) Kârttika 411 Chaitra II, (w. m. i.) Chaitra 412	18 2 10 18 2 37 16 20 17 20	16 51 8 48 0 45 14 29 16 3	1 45 15 30	3 29 17 10	19 13 11 48 4 29 18 11 18 37	5·1 . 8·9 · t. t. 6·2
489 Sept. 25 Mon. 491 Feb. 10 Sun. 491 Aug. 5 Mon. 492 Jau. 30 Thur. 492 July 25 Sat.	Âśvina. 412 Phûlguna. 413 Bhûdrapada 1, (w. m. i.) Bhûdrapada. 414 Mâgha. 414 Śrâvaṇa. 415	16 32 11 44 15 48 15 10 8 11	15 30 10 6 14 12 13 22 6 21	14 27 7 24	15 53 8 58	17 34 13 22 17 24 16 58 10 1	3·8 11·7 11·1 t. t.

A. D.	lliudu Mouth	Time		from Lañ en as 5 A		unrise,	Number of
Year, Month,	and	Greatest phase.	Begin-		od of curation.	End of	twelfths celipsed.
and Day.	Current Śaka Year. $["w,m,i." = \text{with mean intercalations.}]$	[i.c. mo- ment of fullmoon]	Eclinse.	Begin- ning.	End.	Eclipse.	["t."= total
1	2	հ. ւս. 3	h. m.	հ. տ. 5	lı. m.	h. m.	eclipse.]
493 Jan. 18 Mon.	Mâgha	14 26	13 43			15 9	8
493 July 15 Thur. 494 June 5 Sun.	Śrâvaya. 416 Ashâdha I. 417	$\begin{array}{cc} 0 & 11 \\ 0 & 49 \end{array}$	0 2 0 3	=	_	1 20	1.4
494 Nov. 28 Mon. 495 May 25 Thur.	Mûrgasirsha 417 Jyeshtha 418	15 3S 2 51	14 6	2 3	3 39	17 10 4 41	9·8 t.
495 Nov. 18 Sat.	Mûrgaşîrsha	7 13	5 21	6 22	8 4	9 5	t.
496 May 13 Mon. 496 Nov. 6 Wed.	Jyeshtha. 419 Mürgasirsha 419	4 6 20 57	2 36 19 46			5 36 22 8	9·0 5·0
498 Mar. 23 Mon. 498 Sept. 16 Wed.	Chaitra	17 24 11 25	15 50 10 7	_	_	18 58 12 43	10·4 6·5
499 Mar. 13 Sat. 499 Sept. 5 Sun.	Chaitra	9 48 14 19	7 58 12 20	S 59 13 21	10 37 15 3	11 38 16 4	t. t.
500 Mar. 1 Wed. 500 Aug. 24 Thur.	Phâlguna. 422 Bhùdrapada 423	22 18 24 14	21 30 23 1			23 6 25 27	2·2 5·5
502 Jan. 9 Wed.	Mūgha	9 10	7 42		-	10 38	8.4
502 July 5 Fri. 502 Dec. 29 Sun.	Âshāḍha 11, (w. m. i.) Švāvaņa I	24 19 13 52	22 34 12 1	23 44 13 2	24 54 14 42	26 4 15 43	t. t.
503 June 25 Wcd. 503 Dec. 19 Fri.	Āshūdha	10 21 1 39	S 40 0 27	10 1	10 41	12 2 2 51	t. 5·2
505 May 3 Tues.	Jyeshtha I, (10, 11, 11) Vaišākha 11 428	21 55	23 54	-	_	25 56	3.6
505 Oct. 28 Fri. 506 Apr. 23 Sun.	Kårttika	18 37 10 4	17 9 8 12	9 12	10 56	$\begin{array}{ccc} 20 & 5 \\ 11 & 56 \end{array}$	8 1 t.
506 Oct. 17 Tues. 507 Apr. 12 Thur.	Kârttika	21 8 25 7	22 17 23 43	23 18	24 58	25 59 26 31	t. 7·6
507 Oct. 6 Sat.	Kûrttika 430	21 1	22 58	_		25 ()	4.6
509 Feb. 20 Fri. 509 Aug. 15 Sat. 510 Feb. 9 Tues.	Philguna	19 37 23 36	18 1			21 13 25 9	10·9 10·1
510 Feb. 9 Tues. 510 Aug. 5 Thur. 511 Jau. 29 Sat.	Phålguna	22 45 16 0 22 13	20 56 14 10 21 25	22 0 15 11	23 30 16 49	24 34 17 50 23 1	(. t. 2·2
511 July 26 Tucs.	Śrâvana. 431	S 10	7 16	_	_	9 (2·8
512 June 15 Fri. 512 Dec. 8 Sat.	Âshādha. 435 Pausha 435	7 26 21 31	7 15 22 59	_	_	7 37 26 3	$0 \cdot 1$ $9 \cdot 7$
513 June 4 Tues. 513 . Nov. 28 Thur.	Âshfidha I, (w.m.i.) Jycshtha 11	9 13 16 8	7 25 14 16	S 31 15 17	9 55 16 59	11 1 18 0	t. t.
514 May 24 Sat.	Jyeshtha437	10 46	. 9 11		_	12 21	10.7
514 Nov. 18 Tues 516 Apr. 2 Sat.	Mûrgaşîrsha	5 31 25 17	4 22 23 46	_	_	6 46 26 48	5 · 2 9 · 3
516 Sept. 26 Mon. 517 Mar. 23 Thur.	Aśvina	$\begin{vmatrix} 18 & 49 \\ 17 & 45 \end{vmatrix}$	17 35 15 54	16 55	18 35	20 3 19 36	5 · 6 t.
517 Sept. 15 Fri. 518 Mar. 13 Tres.	Aśviua	21 48 6 4	19 56 5 7	20 56	22_40	23 (0 7 1	t. 3·1
518 Sept. 5 Wed. 520 Jan. 20 Mon.	Bhâdrapada 11, (<i>v. m. i.</i>) Âśvina	8 9 17 14	6 51 15 46	_	_	9 27 18 42	6·5 8·4
520 July 16 Thur.		7 35	5 53	7 11	7 59	9 17	ί.
521 Jan. 8 Fri. 521 July 5 Mon.	Mûgha	22 23 17 8	20 32 15 23	21 33 16 34	23 13 17 42	24 14 18 53	t. t.
521 Dec. 29 Wed. 523 May 15 Mon.	Pausha 444 Jyeshtha 446	10 29 7 45	9 16 6 59	=	_	11 42 8 31	$5 \cdot 4$ $2 \cdot 0$
523 Nov. 9 Thur.	Margasirsha46	3 3	1 36	-		4 30	. 8.2

THE INDIAN CALENDAR.

ı D	Hindu Month	Time	measured take	from Laûk en as 6 A.	a mcan sı	ınrise,	Number of
A. D.	and	Greatest phase.	Begin-	Perio		End	twelfths
Year, Month,	Current Śaka Year.	[i.e. mo- ment of	ning of Eclipse.	total obs	End.	of Eelipse.	eelipsed.
and Day.	[" $w.m.i.$ " = with mean intercalations.]	fullmoon]	lı. m.	h. m.	h. m.	h. m.	["t."=total eclipse.]
1	2	3	4	5	6	7	8
524 May 3 Fri. 524 Oct. 28 Mon. 525 Apr. 23 Wed. 525 Oct. 17 Fri. 527 Mar. 4 Thur.	Jyeshtha I, (w. m.i.) Vaiśâkha. 447 Kârttika 448 Vaiśâkha. 448 Kûrttika 448 Phâlguna II, (w. m.i.) Phâlguna. 419	17 24 8 7 8 50 7 43 3 23	15 33 6 15 7 20 6 31 1 50	16 34 7 16 — — —	18 14 8 58 — —	19 15 9 59 10 20 8 55 4 56	t. t. 9·0 5·2 10·1
527 Aug. 27 Fri. 528 Feb. 21 Mon. 528 Aug. 15 Tues. 529 Feb. 9 Fri. 529 Aug. 5 Sun.	Bhâdrapada 450 Phâlguna 450 Bhâdrapada 451 Phâlguna 451 Śrâvana II, (w m. i.) Bhâdrapada 452	7 27 6 21 23 52 5 54 15 47	5 57 4 31 22 0 5 1 14 42	5 34 23 1 —	7 8 24 43 —	8 57 8 11 25 44 6 47 16 52	$8 \cdot 9$ t. t. $2 \cdot 7$ $4 \cdot 2$
530 Dec. 20 Fri. 531 June 15 Sun. 531 Dec. 9 Tues. 532 June 3 Thur. 532 Nov. 28 Suu.	Pausha. 453 Âshâdha. 454 Pausha. 454 Âshâdha I, (w. m. i.) Jyeshtha II. 455 Mûrgaśirsha. 455	9 26 15 33 25 2 17 20 14 13	7 54 13 48 23 10 15 38 13 3	14 59 24 11 16 59 —	16 7 25 53 17 41	10 58 17 18 26 54 19 2 15 23	9·7 t t. t. 4·9
534 Apr. 14 Fri. 534 Oct. 8 Sun. 535 Apr. 3 Tues. 535 Sept. 27 Thur. 536 Mar. 23 Sun.	Vaiśâkha 457 Kârttika 457 Vaiśâkha I, (w.m.i.) Chaitra 458 Âśvina 458 Chaitra 459	9 7 2 28 25 33 5 36 13 38	7 42 1 17 23 41 3 44 12 33	24 41 4 45 —	26 25 6 27	10 32 3 39 27 25 7 28 14 43	7·9 5·0 t. t. 4·1
536 Sept. 15 Mon. 538 Jan. 30 Sat. 538 July 27 Tues. 539 Jan. 20 Thur. 539 July 16 Sat.	Aśvina. 459 Mûgha. 460 Śrâvana. 461 Mûgha. 461 Śrâvaṇa. 462	16 13 25 8 14 58 6 48 24 0	14 49 23 43 13 21 4 57 22 12	- - 5 58 23 18	7 38 24 42	17 37 26 33 16 35 8 39 25 48	7·6 7·8 11·5 t. t.
540 Jan. 9 Mon. 541 May 25 Sat. 541 Nov. 19 Tues. 542 May 14 Wed. 542 Nov. 8 Sat.	Mâgha. 462 Jyeshtha. 464 Mûrgasîrsha. 464 Jyeshtha. 465 Mârgasîrsha. 465	19 14 14 29 11 33 24 42 16 8	18 1 14 6 10 6 22 52 14 16	23 54 15 17	25 30 16 59	20 27 14 52 13 0 26 32 18 0	5.5 0.5 8.2 t. t.
543 May 4 Mon. 543 Oct. 28 Wed. 545 Mar. 14 Tues, 545 Sept. 6 Wed. 546 Mar. 3 Sat.	Jyeshtha I, (w. m. i.) Vaišākha 466 Kârttika 466 Chaitra 468 Âśvina 468 Phâlguna 468	16 26 15 33 10 55 15 26 13 43	14 52 14 20 9 25 14 1 11 53	12 54		18 0 16 46 12 25 16 51 15 33	10.4 5.4 9.0 7.8 t.
546 Aug. 27 Mon. 547 Feb. 20 Wed. 547 Aug. 16 Fri. 548 Dec. 30 Wed. 549 Jnne 25 Fri.	Bhâdrapada 469 Phâlguna 469 Bhâdrapada 470 Pansha 471 Âshâḍha 472	7 50 13 29 23 25 18 17 21 56	5 58 12 29 22 13 16 45 20 16	6 58 21 42	8 42 22 10	9 42 14 29 24 37 19 49 23 36	t. 3·5 . 5·3 9·7 t.
549 Dec. 20 Mon. 550 June 14 Tues. 550 Dec. 9 Fri. 552 Apr. 24 Wed. 552 Oct. 18 Fri.	Pausha 472 Âshâḍha 473 Pausha 473 Vaiśâkha 475 Kârttika 475	9 58 23 59 22 54 16 47 10 14	8 6 22 14 21 43 15 28 9 8	9 7 23 25 — — —	10 49 24 33 — — —	11 50 25 44 24 5 18 6 11 20	t. t. 5·0 6·6 4·3
553 Apr. 14 Mon. 553 Oct. 7 Tucs. 554 Apr. 3 Fri. 554 Scpt. 26 Sat. 556 Feb. 11 Fri.	Vaiśâkha. 476 Kûrttika. 476 Vaiśâkha I, (w. m. i.) Chaitra. 477 Âśvina. 477 Phâlguna. 478	9 17 13 39 21 5 24 26 8 54	7 25 11 47 19 52 22 59 7 31	8 25 12 48 — — —	10 9 14 30 — — —	11 9 15 31 22 18 25 53 10 17	t. t. 5·4 8·2 7·5

	· Hindu Month	Time	measured	from Laul en as 6 A	a mean s		Number of
A. D.	und ∞	Greatest phase.	1 Degine		od of curation.	End	twelfths celipsed.
Year, Month,	Current Śaka Year.	[i.c. mo- ment of	ning of Eclipse.	Begin-	End.	of Eclipse.	["t."= total
and Day.	["w.m.i." = with mean intercalations.]	h, m.	lı, m.	h. m.		h. m.	colipse.]
1 .	2	3	4	5	в	7	8
556 Aug. 6 Snu. 557 Jan. 30 Tnes. 557 July 27 Fri. 558 Jan. 20 Snn. 558 July 16 Tnes.	Bhûdrapada I, (10 .m. i.) Bhûdrapada. 479 Mûgha. 470 Srâvaua. 480 Mûgha. 480 Srâvana. 481	22 24 15 6 6 54 3 54 8 50	20 51 13 14 5 4 2 40 8 20	14 15 6 7 —	15 57 7 41 —	23 57 16 58 8 44 5 8 9 20	10·1 t. t. 5·7 0·8
559 Nov. 30 Snn. 560 May 25 Tnes. 560 Nov. 18 Thur. 561 May 14 Sat. 561 Nov. 7 Mon.	Mûrgaśirsba 482 Jycshtha 483 Mûrgaśirsha 483 Jycshtha 484 Mûrgaśirsha 484	20 5 7 59 24 12 23 58 23 30	18 40 6 10 22 20 22 18 22 15	7 15 23 21 23 48	S 43 25 3 24 8	21 30 9 48 26 4 25 38 24 45	7·9 t. t. t. · 5·9
563 Mar. 25 San. 563 Sept. 17 Mon. 564 Mar. 13 Thur. 564 Sept. 6 Sat. 565 Mar. 2 Mon.	Chaitra 486 Âśvina 486 Chaitra 487 Âśvina I, (w. m. i.) Âśvina 487 Phâlguna 487	18 23 23 40 20 55 15 55 20 56	16 59 22 19 19 4 14 3 19 49	20 5 15 3	21 45 16 47	19 47 25 1 22 46 17 47 22 3	7·7 7·1 1. t. 4·4
565 Aug. 27 Thur. 567 Jan. 11 Tucs. 567 July 7 Thur. 567 Dec. 31 Sat. 568 June 25 Mon.	Bhâdrapada. 488 Mâgha. 489 Śrâvaṇa I, (w. m. i.) Śrâvaṇa. 490 Pausha. 490 Âshâḍha. 491	7 9 3 4 4 26 18 47 6 42	5 52 1 32 2 51 16 55 4 51	17 56 5 59	19 38 7 25	8 26 4 36 6 1 20 39 8 30	6·3 9·6 10 8 t. t.
568 Dec. 20 Thur. 569 June 14 Fri. 570 May 5 Mon. 570 Oct. 29 Wed. 571 Apr. 25 Sat.	Pausha. 491 Asha?ha. 402 Jyeshtha. (vo. m. i.) Jyeshtha I. 493 Kûrttika. 493 Vaiśâkha. 491	7 30 15 48 24 23 18 6 16 46	6 19 15 25 23 11 17 3 14 54	15 55	_ _ _ 17 37	8 41 16 11 25 35 19 9 18 38	5·1 0·5 5·2 3·9 t.
571 Oct. 18 Snn. 572 Apr. 14 Thur. 572 Oct. 7 Fri. 574 Feb. 21 Wed. 574 Aug. 18 Sat.	Kûrttika 494 Vaisûkhu. 495 Kûrttika 495 Phûlguna. 496 Bhûdrapada. 497	21 48 4 19 8 47 16 36 5 56	19 57 3 1 7 18 15 16 4 27	20 58	22 38	23 39 5 37 10 16 17 56 7 25	t. 6·5 8·8 6·9 8·7
575 Peb. 10 Snn. 575 Aug. 7 Wed. 576 Jan. 31 Pri. 576 July 26 Sun. 577 Dec. 11 Sat.	Phâlguna. 497 Bhâdrapada 1, (c.m.i.) Bhâdrapada. 498 Mâgha 498 Śrâvaṇa. 499 Pansha 500	23 20 13 48 12 32 15 26 4 38	21 28 11 58 11 15 14 37 3 13	22 29 12 50 —	24 11 14 37	25 12 15 38 13 49 16 15 6 3	t. t. 6·2 2·3 7·8
578 June 5 Sun. 578 Nov. 30 Wed. 579 May 26 Fri. 579 Nov. 19 Sun. 581 Apr. 5 Sat.	Âshâḍha 1 501 Mârgâśirsha 501 Jyeshtha 502 Mârgaśirsha 502 Vaiśâkha I, (w. m i.) Chaitra tl 504	15 11 8 24 7 30 7 30 1 36	13 25 6 32 5 47 6 14 0 17	14 34 7 33 7 2 —	15 48 9 15 7 58 —	16 57 10 16 9 13 8 46 2 55	t. t. t. 6·1 6·6
581 Sept. 28 Sun. 582 Mar. 25 Wed. 582 Sept. 17 Thur. 583 Mar 14 Sun. 583 Sept. 7 Tues.	Âśvina. 504 Chaitra. 505 Âśvina. 505 Chaitra. 506 Bhâdrapada 11, (10. m. i.) Âśvina. 506	7 55 3 58 24 8 4 15 14 59	6 37 2 6 22 16 3 1 13 37	$ \begin{vmatrix} - & $	4 50 25 0 —	9 13 5 50 26 0 5 29 16 21	6·5 1. t. 5·6 7·3
585 Jan. 21 Sun. 585 July 17 Tucs. 586 Jan. 11 Pri. 586 July 6 Sat. 586 Dcc. 31 Tucs.	Magha. 507 Śravana. 508 Magha 508 Śravana I, (w. m. i.) Śravana. 509 Pausha. 509	11 50 10 56 3 36 13 32 16 5	10 19 9 26 1 44 11 42 14 54	2 45 12 44	- 4 27 14 20	13 21 12 26 5 28 15 22 17 16	9·4 9·0 t. t. 5.0

Λ. D.	. Iliudu Month	Time	measured take	from Lanl en as 6 A		anrise,	Number of
Year, Mouth,	and	Greatest phase.	Begin- ning of		od of curation.	End of	twelfths celipsed.
and Day.	Current Śaka Year. ["w.m.t." = with mean intercalations.]	[i.e. mo. ment of full moon]	Eclipse.	Begin- ning.	Eud.	Eclipse.	["t." = total
1	2	h. m.	h. m.	h. m.	lı. m.	h. m.	eclipse.]
587 June 25 Wed.	Âshâḍha	23 0	22 12			23 48	2 · 2
588 May 16 Sun. 588 Nov. 9 Tues. 589 May 5 Thur. 589 Oct. 29 Sat.	Jycshtha. 511 Mårgasirsha. 511 Jycshtha 1, (w. m. i.) Vaisakha II. 512 Karttika. 512	$\begin{array}{c cccc} 7 & 58 \\ 2 & 6 \\ 24 & 14 \\ 6 & 0 \end{array}$	$\begin{bmatrix} 6 & 56 \\ 1 & 5 \\ 22 & 24 \\ 4 & 9 \end{bmatrix}$	23 25 5 10	25 3 6 50	$\begin{bmatrix} 9 & 0 \\ 3 & 7 \\ 26 & 4 \\ 7 & 51 \end{bmatrix}$	3·7 3·6 t. t.
590 Apr. 25 Tncs. 590 Oct. 18 Wcd. 592 Mar. 3 Mon. 592 Aug. 28 Thur. 593 Feb. 21 Sat.	Vaiśâkha 513 Kârttika 513 Chaitra 515, (w. m. i.) Phâlgnua 514 Bhâdrapada 515 Phâlgnua 515	11 25 17 16 24 8 13 36 7 26	9 58 15 45 22 53 12 13 5 34	6 34	- - 8 18	12 52 18 47 25 23 14 59 9 ·18	8·2 9·3 5·8 7·5 t.
593 Aug. 17 Mon. 594 Feb. 10 Wed. 594 Aug. 6 Fri. 595 Dec. 22 Thur. 596 June 15 Fri.	Bhâdrapada. 516 Phâlguna. 516 Bhâdrapada 1, (w. m. i.) Bhâdrapada 517 Pausha 518 Âshâḍha 519	20 54 21 4 22 6 13 9 22 31	19 2 19 44 21 2 11 45 20 48	20 3	21 45 — — 22 59	22 46 22 24 23 10 14 33 24 14	t. 6·8 4·0 7·7 t.
596 Dec. 10 Mon. 597 June 5 Wed. 597 Nov. 29 Fri. 599 Apr. 16 Thur. 599 Oct. 9 Fri.	Pausha 519 Âshâḍha 1 520 Mârgasirsha 520 Vaiśākha 522 Karttika 522	16 31 14 56 15 33 8 44 16 25	14 42 13 10 14 16 7 34 15 9	15 43 14 18 — —	17 25 15 34 — —	18 26 16 42 16 50 9 54 17 41	t. t. 6·2 4·9 6·0
600 Apr. 4 Mon. 600 Sept. 28 Wed. 601 Mar. 24 Fri. 601 Sept. 17 Sun. 603 Feb. 1 Fri.	Vnišākha I, (w. m. i.) Chnitra. 523 Âśvina. 528 Chaitra. 524 Âśvina. 524 Mågha. 525	10 51 8 30 11 23 22 59 20 28	8 50 6 38 10 3 21 33 18 58	10 0 7 39 	11 42 9 21 — —	12 43 10 22 12 43 24 25 21 58	t. t 6·9 8·1 9·1
603 July 28 Sun. 604 Jan. 22 Wed. 604 July 16 Thur. 605 Jan. 10 Sun. 605 July 6 Tucs.	Srâvana 526 Mâgha 526 Śrâvana 527 Mâgha 527 Srâvana I, (w. m. i.) Śrâvana 528	17 32 12 16 20 19 24 34 6 19	16 11 10 24 18 28 23 24 5 15	11 25 19 29	$\begin{bmatrix} - \\ 13 & 7 \\ 21 & 9 \\ - \\ - \end{bmatrix}$	18 53 14 8 22 10 25 44 7 23	7·0 t. t. 4·9 4·0
606 May 27 Fri. 606 Nov. 20 Sun. 607 May 17 Wed. 607 Nov. 9 Thur. 608 May 5 Sun.	Jycshtha 529 Mârgaśirsha 529 Jycshtha 530 Mârgaśirsha 530 Jyeshtha 1, (w. m. i.) Vaiśâkha 11. 531	15 28 10 11 7 40 14 27 18 26	14 43 9 10 5 50 12 36 16 53	6 54 13 37	8 .26 15 17	16 13 11 12 9 30 16 18 19 59	1·9 · 3·6 · t. · t. · 9·9
608 Oct. 29 Tucs. 610 Mar. 15 Sun. 610 Sept. 8 Tucs. 611 Mar. 4 Thur. 611 Aug. 29 Sun.	Kârttika 531 Chaitra 533 Âśvina 533 Chaitra 534 Bhâdrapada 534	1 57 7 34 21 21 15 24 4 4	$\begin{bmatrix} 0 & 25 \\ 6 & 23 \\ 20 & 3 \\ 13 & 32 \\ 2 & 12 \end{bmatrix}$	$\begin{bmatrix} - \\ - \\ 14 & 32 \\ 3 & 12 \end{bmatrix}$	- - 16 16 4 56	3 29 8 45 22 39 17 16 5 56	9·6 5·0 6·4 . t. t.
612 Fcb. 22 Tucs. 612 Aug. 17 Thur. 614 Jan. 1 Tucs. 614 June 27 Thur. 614 Dec. 21 Sat.	Phâlguna 534 Bhâdrapada 535 Pausha 536 Âshâḍha 537 Pausha 537	5 29 4 54 21 35 5 51 24 41	$\begin{bmatrix} 4 & 7 \\ 3 & 41 \\ 20 & 11 \\ 4 & 12 \\ 22 & 49 \end{bmatrix}$	5 44 23 50	5 58 25 32	$\begin{bmatrix} 6 & 51 \\ 6 & 7 \\ 22 & 59 \\ 7 & 30 \\ 26 & 33 \end{bmatrix}$	7·2 5·4 7·6 t. t.
615 Juue 16 Mon. 615 Dec. 10 Wed. 616 June 5 Sat. 617 Apr. 26 Tues. 617 Oct. 19 Wed.	Âshâḍha 538 Pausha 538 Âshâḍha I 539 Vaisâkha 540 Kârttika 540	22 26 23 41 15 10 15 37 24 54	20 37 22 23 14 52 14 39 23 41	21 42	23 10	24 15 24 59 15 28 16 85 26 7	t. 6:5 0:3 3:3 5:5

	Time measured from Lanka mean sunrise, Ulindu Month taken as 6 A. M.						Number of
A. D.	nnd	Greatest phase.	Begin-	Peri	od of scuration.	End	twelftlis
Year, Mouth,	Current Śaka Year.	[i.e. mo- ment of	ning of Eclipse.	Begin-	End.	of Eclipse.	celipsed. ["t."= total
and Day.	["w.m.i." = with mean intercalations.]	full moon]	h. m.	h. m.	h. m.	h. m.	cclipse.]
1	2	3	4.	5	8	7	8
618 Apr. 15 Sat. 618 Oct. 9 Mon. 619 Apr. 4 Wed. 619 Sept. 29 Sat. 621 Feb. 12 Thur.	Vaiśákha 541 Kârttika 541 Vaiśákha I, (w. m. i.) Chaitra 542 Ásviua 542 Phálguna 543	17 · 36 16 · 55 18 · 25 7 · 3 5 · 1	15 46 15 3 16 57 5 35 3 33	16 47 16 4 —	18 25 17 46 — —	19 26 18 47 19 53 8 31 6 29	t. t. 8·4 8·5 8·6
621 Aug. 7 Fri 622 Feb. 1 Mon. 622 July 28 Wed. 623 Jan. 22 Sat. 623 July 17 Sun.	Bhâdrapada I, (w. m. i.) Bhâdapada	24 13 20 51 3 19 8 59 13 37	22 59 18 59 1 27 7 47 12 23	19 59 2 27 —	21 43 4 11 —	25 27 22 43 5 11 10 11 14 51	5·6 t. t. 5·3 5·7
624 June 6 Wed. 624 Nov. 30 Fri. 625 May 27 Mou. 625 Nov. 19 Tues. 626 May 16 Fri.	Âshâdha 547 Mârgasirsha 547 Jyeshtha 648 Mârgasirsha 548 Jyeshtha 549	22 58 18 19 14 53 22 54 25 21	22 35 17 20 13 6 21 3 23 44	14 11 22 4	15 35 23 44	23 21 19 18 16 40 24 45 26 58	0.5 3.4 t. t. 11.4
626 Nov. 9 Sun. 628 Mar. 25 Fri. 628 Sept. 19 Mon. 629 Mar. 14 Tues. 629 Sept. 8 Fri.	Mûrgaśirsha 549 Chaitra 551 Áśvina 551 Chaitra 552 Áśvina 1, (w. m. i.) Áśvina 552	10 35 14 49 5 11 23 14 11 18	9 3 13 46 3 58 21 22 9 26	22 23 10 27	24 5 12 9	12 7 15 52 6 24 25 6 13 10	9·8 3·9 5·5 t. t.
630 Mar. 4 Sun. 630 Aug. 28 Tues. 632 Jan. 13 Mon. 632 July 7 Tues. 633 Jau. 1 Fri.	Chaitra 553, (w. m. i.) Phùlguna 552 Bhàdrapada 553 Màgha 554 Śràvaṇa 1, (w. m. i.) Śràvaṇa 555 Pausha 555	13 40 11 52 5 54 13 13 8 42	12 14 10 32 4 32 11 39 6 50	- - 7 50	9 34	15 6 13 12 7 16 14 47 10 34	8·1 6·8 7·2 10·4 1.
633 June 27 Sun. 633 Dec. 21 Tues. 634 June 16 Thur. 635 May 7 Sun. 635 Oct. 31 Tues.	Âshâḍha 556 Pausha 556 Âshâḍha 557 Jyeshtha, (w. m. č.) Jyeshtha l 558 Kâcttika 558	5 53 7 45 22 33 22 29 9 37	4 3 6 26 21 49 21 47 8 24	5 5 — — —	6 41 - - -	7 43 9 4 23 17 23 11 10 50	t. 6·6 1·8 1·6 5·4
636 Apr. 25 Thur. 636 Oct. 19 Sat. 637 Apr. 14 Mon. 637 Oct. 9 Thur. 639 Fcb. 23 Tres.	Vaisâkha 559 Kârttika 559 Vaisâkha 560 Kârttika 560 Phâlgana 561	24 15 25 30 25 22 15 19 13 26	22 25 23 39 23 49 13 49 12 0	23 29 24 40 — —	25 1 26 20 — — —	26 5 27 21 26 55 16 49 14 52	t. t. 9·9 9·1 8·0
639 Aug. 19 Thur. 640 Feb. 13 Sun. 640 Aug. 7 Mon. 641 Feb. 1 Thur. 641 July 27 Fri.	Bhàdrapada 562 Phâlguna 562 Bhâdrapada 1, (w. m. i.) Bhâdrapada 563 Mâgha 563 Śrâvaṇa 564	7 7 5 21 10 25 17 14 21 2	6 3 3 29 8 33 16 0 10 41	4 29 9 34 —	6 13 11 16	8 11 7 13 12 17 18 28 22 23	4·0 1. 1. 5·7 7·1
642 Dec. 12 Thur. 643 June 7 Sat. 643 Dec. 1 Mon. 614 May 27 Thur. 644 Nov. 19 Fri.	Pausha 565 Âshûdha I, (w. m. i.) Âshûdha 566 Mârgasîrsha 566 Jyeshtha 567 Mârgasîrsha 567	2 32 22 10 7 27 8 10 19 23	1 32 20 25 5 36 6 28 17 50	21 37 6 37 7 48	22 43 8 17 8 32	3 32 23 55 9 18 9 52 20 56	3·5 t. t. t. 10·1
646 Apr. 5 Wed. 646 Sept. 30 Sat. 647 Mar. 26 Mon. 647 Sept. 19 Wed. 648 Mar. 14 Fri.	Vaiśākha, (w. m. i.) Vaiśākha I. 569 Āśvina 569 Chaitra 570 Āśvina 570 Chaitra 571	21 59 13 13 7 0 18 47 21 49	21 5 12 3 5 9 16 56 20 19	6 10 17 57	7 50 19 37	22 53 14 23 8 51 20 38 23 19	2·8 4·8 t. t. 9·1

Λ. D.	Hindu Month	Time measured from Lanka mean sunrise, taken as 6 A. M.				Number of	
Year, Month,	กบง้	Greatest phase.	Begin-		od of curation.	End	twelfths , colipsed.
and Day.	Current Saka Year.	[i.e inn- ment of full moon]	ning of Eclipse.	Begin-	End.	of Erlipse,	['t."= total
	["w, m, t" = with mean intercalations.]	h, m.	h. m.	h. m.	lı. m.	lı, ın.	eclipse.]
1	2	3	1_1_	5	8	7	8
648 Sept. 7 Sub. 650 Jan. 24 Sat. 650 July 18 Sub. 651 Jan. 12 Wed. 651 July 8 Pri.	Âśviua 571 Mūgha 572 Śravaja 573 Mūgha 573 Srāvaja 573 Srāvaja 574	18 59 14 10 20 43 16 46 13 25	17 34 12 49 19 13 14 51 11 37	15 54 12 35	17 35 11 15	20 24 15 31 22 13 15 35 15 19	7·8 7·0 8·0 t. t.
652 Jan. 1 Sun. 652 June 27 Wrd. 653 Nov. 10 Sun. 654 Mny 7 Wed. 654 Oct. 31 Fri.	Pausha 574 Ashādha 575 Mūrgaširsha 576 Jyeshtha (v. m. i.) Jyeshtha 577 Kūrttika 577	15 52 5 51 18 27 6 47 10 13	13 83 4 52 17 15 5 0 5 22	6 5 9 23	7 20	17 11 6 50 19 39 8 31 12 4	6·7 3·3 5·3 t, t.
655 Apr. 26 Sun. 655 Oct. 20 Tuts. 657 Mar. 5 Sun. 657 Aug. 29 Turs. 658 Feb. 23 Fri.	Vnišākha 578 Kācttika 578 Chaitra 589, (w. m. i.) Phālguna 579 Bhādrapada. 580 Phālguna. 580	5 13 23 38 21 43 13 10 13 42	6 35 22 7 20 21 13 16 11 50	12 50	1: 3:	9 51 25 9 23 5 15 4 15 31	11 · 6 9 · 4 7 · 2 2 · 8 t.
658 Aug. 18 Sat. 659 Feb. 13 Wed. 659 Aug. 8 Thur. 660 Dec. 22 Tucs. 661 June 18 Fri.	1thå frapada. 581 Phålguna. 581 Ithådrapada 1, (w. m. i.) 1thådrapada. 582 Pausha. 583 Åshådha. 584	17 43 1 22 4 39 10 45 5 19	15 52 0 7 3 11 9 45 3 38	16 53 	18 33 = = = = = = = = = = = = = = = = = =	19 34 2 37 6 7 11 45 7 0	t. 5 S S · 4 3 · 5 t.
661 Dec. 11 Sat. 662 June 7 Taes. 662 Dec. 1 Thur. 664 Apr. 16 Taes. 664 Oct. 10 Thur.	Pausha 581 Ashadha 1. (w.m.i.) Ashadha 585 Margasirsha 585 Valsakha 587 Karttika 587	16 2 13 55 4 16 5 8 21 19	14 11 15 9 2 43 4 30 20 14	15 12 19	16 52 15 31 —	17 53 16 41 5 49 5 46 22 21	t. t. 10:0 1:3 4:2
665 Apr. 5 Sat. 665 Sept. 30 Thes. 666 Mar. 26 Thur. 666 Sept. 19 Sat. 668 Feb. 3 Thur.	Vnišákha, (w. m. i.) Chaitra 11. 585 Ásvina. 585 Chaitra. 589 Ašvina. 589 Můgha. 590	14 35 9 22 5 49 2 17 22 18	12 48 0 32 4 16 0 48 20 59	13 49 1 33 —	15 27 8 11 —	16 28 4 12 7 22 3 46 23 37	t. t. 10·1 \$·8 6·7
668 July 29 Sat. 669 Jan. 22 Mon. 669 July 18 Wed. 670 Jan. 11 Fri. 670 July 8 Mon.	Śrávaņa 591 Māgha 591 Śrávaņa 592 Mūgha 502 Srávaņa I, (w. m. i.) Šrávaņa 593	3 21 24 38 21 5 23 53 13 10	2 57 22 46 10 13 22 32 12 1	23 46 20 13	25 30 21 57 —	5 45 26 30 22 57 25 14 14 19	7·6 t. t. 7·1 4·7
671 Nov. 22 Sat. 672 May 17 Mon. 672 Nov. 10 Wed. 673 May 6 Fri. 673 Oct. 31 Mon.	Mûrgasîrsha 504 Jyeshtha 595 Mûrgasîrsha 595 Jyeshtha, (w. m. i.) Jyeshtha l 596 Kûrttika 596	3 16 13 19 15 59 15 3 8 2	2 4 11 34 17 8 13 21 6 31	12 46 18 9 14 39	13 52 19 49 15 27	4 28 15 4 20 50 16 45 9 33	5 2 t. t. t. 9·5
675 Mar. 17 Sat. 675 Sept. 9 Sun. 676 Mar. 5 Wed. 676 Aug. 28 Thur. 677 Feb. 23 Mon.	Chaitra 598 Âświna. 598 Chaitra 599, (w. m. i.) Phâlguna 598 599 Bhâdrapada. 599 Phâlguna. 599	5 50 21 18 21 54 23 10 9 21	4 32 20 31 20 2 23 20 8 2	21 2 24 22 —	22 46 25 58	$\begin{bmatrix} 7 & 8 \\ \frac{52}{22} & 2 \\ 23 & 46 \\ 27 & 0 \\ 10 & 40 \end{bmatrix}$	6 · 4 1 · S t. t. 6 · 6
677 Aug. 18 Tucs. 679 Jan. 2 Sun. 679 June 29 Wed. 679 Dec. 22 Thur. 680 June 17 Sun.	Bhadrapada. 600 Pausha. 601 Âshâḍha. 602 Pausha. 602 Âshâḍha. 603	12 21 18 55 12 34 24 41 21 37	10 49 17 57 10 58 22 50 19 49	23 51 20 55	25 31 22 19	13 53 19 53 14 10 26 32 23 25	9.8 3.2 11.0 t.

	. Hindu Month	Time measured from Lanka mean sunrise, taken as 6 A.M.					Number of
A. D. Year, Month,	and	Greatest phase.	negin-		od of curation.	End	twelfths celipsed.
and Day.	Current Saka Year.	[i.c. mo- ment of	uing of Eclipse.	Begin-	End.	of Eclipse.	["t." = total]
and Day.	["w.m.i" = with mean intercalations.]	h, m.	h. m.	b. m.	h. m.	h. m.	eclipse.]
1	2	3	4	5	6	7	8
680 Dcc. 11 Tucs. 682 Oct. 22 Wcd. 683 Apr. 16 Thur. 683 Oct. 11 Sun. 684 Apr. 5 Tucs.	Pausha 603 Kârttika 605 Vaiśâkha 606 Kârttika 606 Vaiśâkha, (w. m. i.) Chaitra II. 607	$\begin{bmatrix} 13 & 11 \\ 5 & 31 \\ 22 & 10 \\ 10 & 2 \\ 13 & 43 \end{bmatrix}$	$\begin{bmatrix} 11 & 37 \\ 4 & 29 \\ 20 & 20 \\ 8 & 12 \\ 12 & 6 \end{bmatrix}$	21 23 9 14	22 57 10 50	14 45 6 33 24 0 11 52 15 20	10·2 3·7 t. t. 11·5
684 Scpt. 29 Thur. 686 Fcb. 14 Wed. 686 Aug. 9 Thur. 687 Feb. 3 Sun. 687 July 30 Tues.	Âśvina 607 Phâlguna, 608 Bhâdrapada. 609 Mâgha. 609 Śrâvana 610	9. 39 6 16 11 58 8 25 4 44	$\left \begin{array}{ccc} 8 & 7 \\ 5 & 1 \\ 10 & 41 \\ 6 & 33 \\ 2 & 52 \end{array}\right $	$\begin{bmatrix} - \\ - \\ 7 & 34 \\ 3 & 52 \end{bmatrix}$	9 16 5 36	11 11 7 31 13 15 10 17 6 36	9·7 5·9 6·3 t. t.
688 Jan. 23 Thur. 683 July 18 Sat. 689 Dec. 2 Thur. 690 May 28 Sat. 690 Nov. 22 Tues.	Mâgha. 610 Śrâvana. 611 Mârgaśirsha 612 Jyeshtha 613 Mârgaśirsha 613	7 51 20 32 12 9 19 41 3 51	6 28 19 15 10 57 18 1 2 0	19 31 3 1	19 51 4 41	9 14 21 49 13 21 21 21 5 42	7·4 6·3 5·2 t.
691 May 17 Wed. 691 Nov. 11 Sat. 693 Mar. 27 Thur. 693 Sept. 20 Sat. 694 Mar. 17 Tues.	Jyeshtha 614 Mûrgaśirsha 614 Chaitra 616 Âśvina 616 Chaitra 617	21 48 16 36 13 53 4 42 5 53	20 2 15 4 12 39 4 11 4 1	21 13 — — 5 2	22 23 — — — 6 44	23 34 18 8 15 7 5 13 7 45	t. 9·6 5·6 0·9 t.
694 Sept. 9 Wcd. 695 Mar. 6 Sat. 695 Aug. 29 Sun. 697 Jan. 13 Sat. 697 July 9 Mon.	Âśvina 617 Chaitra I 618, (w. m. i.) Phâlguna 617 618 Bhadrapada 618 Mâgha 619 Śrâvaṇa I, (w. m. i.) Śrâvaṇa 620	8 48 17 11 20 13 3 4 19 49	6 58 15 48 18 37 2 8 18 18	8 1 - - -	9 35 — — — —	10 38 18 34 21 49 4 0 21 20	$t.$ $7 \cdot 4$ $10 \cdot 9$ $3 \cdot 0$ $9 \cdot 2$
698 Jan. 2 Wed. 698 June 29 Sat. 698 Dec. 22 Sun. 699 June 18 Wed. 700 Nov. 1 Mon.	Pausha 620 Âshâdha 621 Pausha 621 Âshâdha 622 Kârttika 623	9 13 4 21 22 2 6 23 13 46	7 22 2 31 20 28 5 48 12 48	8 23 3 33 — — —	10 3 5 9 — —	11 4 6 11 23 36 6 58 14 44	t. t. 10·3 1·1 3·3
701 Apr. 27 Wcd. 701 Oct. 21 Fri. 702 Apr. 16 Sun. 702 Oct. 10 Tucs. 704 Fcb. 25 Mon.	Vaisakha 624 Karttika 624 Vaisakha 625 Karttika 625 Phalguna 626	5 39 17 52 21 34 17 20 14 3	3 51 16 2 19 53 15 46 12 52	4 57 17 5 21 15	6 21 18 39 21 53 —	7 27 19 42 23 15 18 54 15 14	t. t. t. 10·3 5·1
704 Aug. 19 Tucs. 705 Feb. 13 Fri. 705 Aug. 9 Sun. 706 Fcb. 2 Tues. 706 July 30 Fri.	Bhâdrapada. 627 Phâlguna. 627 Bhâdrapada. 628 Mâgha. 628 Śrûvaṇa. 629	19 45 16 0 12 27 15 40 3 58	18 33 14 9 10 35 14 15 2 34	15 10 11 36 —	16 50 13 18 —	20 57 17 51 14 19 17 5 5 22	5 2 t. t.· 7·9 7·6
707 Dec. 13 Tues. 708 June 8 Fri. 708 Dec. 2 Sun. 709 May 23 Tues. 709 Nov. 21 Thnr.	Pausha 630 Âshâḍha 631 Mârgaśirsha 631 Jyeshtha 632 Mârgaśirsha 632	21 8 2 7 12 41 4 32 25 9	19 57 0 33 10 50 2 43 23 37	— 11 51 3 48 —	 13 31 5 16 	22 19 3 41 14 32 6 21 26 41	5·1 10·3 t. t 9 8
710 May 17 Sat. 711 Apr. 7 Tues. 712 Mar. 27 Sun. 712 Sept. 19 Mou. 713 Mar. 16 Thur.	Jycshtha. 633 Vaiśákha, (ω. m. i.) Vaiśákha I. 634 Chaitra. 635 Áśvina. 635 Chaitra. 636	13 43 21 49 13 44 16 33 24 46	13 20 20 43 11 53 14 44 23 19	12 54 15 49	_ 14 34 17 17 —	14 6 22 55 15 35 18 22 26 13	0·5 4·3 t. t. 8·2

	Hindu Month	Time	measured tak	from Laŭ en as 6 A	ka meau s	unrise,	Number of
A. D. Year, Month,	and	Greutest plase.	Begin- ning of	Peri	od of scuration.	End of	twelfths celipsed.
and Day.	Current Saka Year. [" w, m, i ." = with mean intercalations.]	[i.c. mo- ment of full moon]	Eclipse.	Begin- ning.	End.	Eclipse.	["t."=total
1	2	h. m.	h. m.	h. m.	h. ոս. 6	h. m.	eclipse.]
713 Sept. 9 Sat. 715 Jan. 24 Thur. 715 July 21 Sun. 716 Jan. 13 Mon. 716 July 9 Thur.	Âśvina. 636 Môgha 637 Śrâvana. 638 Môgha 638 Śrâvana I, (w. m. i.) Śrâvana. 639	4 11 11 3 2 50 17 45 11 4	2 32 10 7 1 35 15 55 9 13	- - 16 56 10 14	18 34 11 54	5 50 11 59 4 23 19 35 12 55	11·9 3·0 7·6 t. t.
717 Jan. 2 Sat. 717 June 28 Mon. 718 Nov. 12 Sat. 719 May 8 Mon. 719 Nov. 1 Wed.	Pausha 639 Âshûdha 640 Mûrgasîrsha 641 Jyeshtha 642 Kûrttika 642	6 51 12 46 22 11 13 4 25 45	5 17 11 50 21 17 11 18 23 55	- - 12 28 24 59	13 40 26 31	8 25 13 42 23 5 14 50 27 35	10·4 3·0 2·8 t. t.
720 Apr. 27 Sat. 720 Oct. 20 San. 722 Mar. 7 Sat. 722 Aug. 31 Mon. 723 Feb. 24 Wed.	Vaiśākha 643 Kūrttika 643 Chaitra, (w. m. i.) Chaitra I 645 Bhâdrapada 645 Phûlguna 615	5 14 25 1 21 45 3 40 23 30	3 30 23 26 20 38 2 35 21 39	4 42 — — — 22 40	5 46 — — — 24 20	6 58 26 36 22 52 4 45 25 21	t. 10·8 4·4 4·2 t.
723 Aug. 20 Fri. 724 Feb. 13 Sun. 724 Aug. 9 Wed. 725 Dec. 24 Mon. 726 June 19 Wed.	Bbûdrapada 616 Phâlguna. 646 Bhûdrapada I, (v. m. i.) Bhûdrapada. 647 Pausha. 648 Âshûdha. 649	20 21 23 22 11 31 6 0 8 29	18 30 21 54 10 0 4 48 7 1	19 31 — — —	21 11 — — —	22 12 24 50 13 2 7 12 9 57	t. 8·6 9·2 5·3 8·4
726 Dec. 13 Fri. 727 June 8 Sun. 727 Dec 3 Wed. 728 May 27 Thur. 729 Apr. 18 Mon.	Pansha. 649 Ashadha. 650 Margasirsha. 650 Jyeshtha. 651 Vaisakha. 652	21 35 11 16 9 44 20 54 5 32	19 41 9 26 8 12 20 3 4 36	20 45 10 27 —	22 25 12 5 — —	23 26 13 6 11 16 21 45 6 28	t. t. 9·7 2·5 3·0
730 Apr. 7 Fri. 730 Sept. 30 Sat. 731 Mar. 28 Wed. 731 Sept. 20 Thur. 733 Feb. 3 Tues.	Vniśâkha, (w. m. i.) Vniśâkha I. 653 Âśvina. 654 Chaitra. 654 Âśvina. 654 Phâlguna, (w. m. i.) Mâgha 11. 655	21 31 21 28 8 15 12 19 19 0	19 41 22 41 6 41 10 38 18 8	20 43 23 46 — 11 59	22 19 25 10 	23 21 26 15 9 46 14 0 19 52	t. t. 9·1 t. 2·6
733 July 31 Fri. 734 Jan. 24 Sun. 734 July 20 Tucs. 735 Jan. 13 Thur. 735 July 9 Sat.	Śrâvaņa 656 Mīngha 656 Śrâvaņa 657 Māgha 657 Śrâvaņa 1, (w. m. i.) Srâvaņa	10 19 2 13 17 46 15 41 19 15	9 3 0 23 15 54 14 10 18 5	1 24 16 54 —	3 2 18 38 —	11 35 4 3 19 38 17 18 20 25	6·0 t. t. 10·4 4·9
736 Nov. 23 Fri. 737 May 18 Sat. 737 Nov. 12 Tues. 738 May 8 Thur. 738 Nov. 1 Sat.	Mûrgasîrsha 659 Jyeshtha 660 Mûrgasîrsha 660 Jyeshtha 661 Kûrttika 661	6 36 20 26 9 46 12 50 8 54	5 43 18 43 7 57 11 3 7 17	19 59 9 1 12 11	20 53 10 31 13 29	7 29 22 9 11 35 14 37 10 31	2·7 t. t. t. 11·4
740 Mar. 18 Fri. 740 Sept. 10 Sat. 741 Mar. 7 Tucs. 741 Aug. 31 Thur. 742 Feb. 24 Sat.	Chaitra 663 Âśvina 663 Chaitra 664, (w. m. i.) Phâlguna II 663. Bhâdrapada 664 Phâlguna 664	5 11 11 46 6 49 4 18 7 1	4 13 10 48 4 59 2 28 5 30	$\begin{array}{c} - \\ 6 \\ 3 \\ 29 \\ - \end{array}$	- 7 37 5 7	6 9 12 44 8 39 6 8 8 32	3·2 3·2 t. t. 9·5
742 Aug. 20 Mon. 744 Jan. 4 Sat. 744 June 29 Mon. 744 Dec. 24 Thur. 745 June 18 Fri	Bhâdrapada 665 Pausha 666 Âshâḍha 667 Pausha 667 Âshâḍha 668	19 6 14 51 14 54 6 23 17 59	17 32 13 40 13 36 4 32 16 8	- - 5 33 17 9	- - 7 13 18 49	20 40 16 2 16 12 .8 14 19 50	10·2 5·1 6·5 t.

	Hindu Month	Tin	me		from Lanl en as 6 A		unrise,	Number of
A. D.	and	Greate phase		Begin-		od of	End	twelfths
Year, Month,	Current Saka Year.	[i.c.m	10.	ning of Eclipse.	Begin-	euration. End,	of Eelipse.	eelipsed.
and Day.	["w.m.i" = with mean intercalations.]	fullmo h, n	on]	h. un.	ning. h. m.	h. m.	h. m.	["t."= total eclipse.]
1	2	3		4	5	<u>6</u>	7	8
745 Dec. 13 Mon. 746 June 8 Wed. 747 Apr. 29 Sat. 748 Apr. 18 Thur. 748 Oct. 11 Fri.	Pausha 668 Âshâdha 669 Vaiśâkha 670 Vaiśâkha 671 Kârttika 671	$\begin{array}{cc}4&1\\13&1\\5\end{array}$	15 10 11 8 36	16 43 3 4 12 28 3 19 6 49	 4 23 7 57		19 47 5 16 13 54 6 57 10 23	9·7 4·3 1·7 t.
749 Apr. 7 Mon. 749 Sept. 30 Tues. 751 Feb. 15 Mon. 751 Aug. 11 Wed. 752 Feb. 4 Fri.	Vaiśâkha, (w. m. i.) Vaiśâkha I. 672 Âśvina. 672 Phâlguna. 673 Bhâdrapada 674 Phâlguna, (w. m. i.) Mâgha 674	20 3 2 4 17 4	34 39 49 40 33	13 58 18 56 2 2 16 32 8 43	20 14 — 9 44	21 4 — — 11 22	17 10 22 22 3 36 18 48 12 23	$10 \cdot 9$ t. $2 \cdot 1$ $4 \cdot 6$ t.
752 July 30 Sun. 753 Jan. 23 Tues. 753 July 20 Fri. 754 Dec. 4 Wed. 755 May 30 Fri.	Śrâvaṇa 675 Mâgha 675 Śrâvaṇa 676 Mârgaśirsha 677 Jyeshṭha 678	24 2 1 4 15	37 22 43 0 46	22 45 22 46 0 24 14 8 2 7	23 46	25 28 — — —	26 29 25 58 3 2 15 52 5 25	t. 10·9 6·6 2·6 11·9
755 Nov. 23 Sun. 756 May 18 Tues. 756 Nov. 11 Thur. 757 May 8 Sun. 758 Mar. 29 Wed.	Mârgasîrsha 678 Jyeshtha 679 Mârgasîrsha 679 Jyeshtha 680 Chaitra 681	20 2 16 5 13	17 21 51 0 26	15 58 18 32 15 13 12 39 11 39	17 2 19 37 —	18 32 21 5 — —	19 36 22 10 18 29 13 21 13 13	t. t. 11·6 0·4 2·1
758 Sept. 21 Thur. 759 Mar. 18 Sun. 759 Sept. 11 Tues. 760 Mar. 6 Thur. 760 Aug. 31 Sun.	Âśvina. 681 Chaitra. 682 Âśvina. 682 Chaitra 683, (w. m. i.) Phâlguna II 682. Bhâdrapada 683	13 5 12 2 14 3	58 57 26 30 47	19 7 12 7 10 36 12 56 1 11	13 11 11 39 —	14 43 13 13	20 49 15 47 14 16 16 4 4 23	2·5 t. t. 10·4 11·1
762 Jan. 14 Thur. 762 July 10 Sat. 763 Jan. 4 Tues. 763 June 29 Wed. 763 Dec. 25 Sun.	Mâgha 684 Śrâvaṇa 685 Pausha 685 Âshâḍha 686 Pausha 686	21 2 15 1 24 4	10 21 12 15 18	22 30 20 14 13 22 22 53 1 16	14 23 23 53	- 16 1 25 37	24 50 22 28 17 2 26 37 4 20	4·9 4·5 t. t. 9·7
764 June 18 Mon. 765 May 9 Thur. 766 Apr. 29 Tues. 766 Oct. 22 Wed. 767 Apr. 18 Sat.	Âshâdha 687 Jyeshtha 688 Vaiśâkha 689 Kârttika 659 Vaiśâkha 690	20 4 12 3 16 5	19 18 30 50 12	10 4 20 30 10 43 15 4 21 3	 11 51 16 12 22 42	13 9 17 28 22 42	12 34 21 6 14 17 18 36 24 21	5·8 0·3 t. t. t.
767 Oct. 12 Mon. 769 Feb. 25 Sat. 769 Aug. 22 Tues. 770 Feb. 14 Wed. 770 Aug. 11 Sat.	Kârttika 690 Phâlguna 691 Bhâdrapada 692 Phâlguna 692 Bhâdrapada 693	1 1 18 4	4 33 11 47 32	3 20 9 55 0 13 16 57 5 42	$egin{array}{cccc} 4 & 34 & & & & & \\ & - & & & & & & \\ 17 & 59 & & & 6 & 43 & & & \\ \end{array}$	5 34 — — 19 35 8 21	6 48 11 11 2 9 20 37 9 22	t. 1·3 3·3 t.
771 Feb. 4 Mon 771 July 31 Wed. 772 Dec. 14 Mon. 773 June 9 Wed. 773 Dec. 4 Sat.	Phâlguna, (w. m. i.) Mâgha 693 Śrâvana 694 Pausha. 695 Âshâḍha 696 Mârgaśirsha 696	8 2 23 3 11	1 22 30 7 53	7 24 6 54 22 39 9 33 0 4	_ _ _ 1 9		10 38 9 50 24 21 12 41 3 42	$11 \cdot 3$ $8 \cdot 4$ $2 \cdot 5$ $10 \cdot 3$ t
774 May 30 Mon. 774 Nov. 22 Turs. 775 May 19 Fri. 776 Apr. 8 Mon. 776 Oct. 2 Wed.	Jyeshtha 697 Margasirsha 697 Jyeshtha 698 Vaisakha 699 Asvina 699	24 5 20 2 19 3	50 54 24 36 ·	2 0 23 16 19 40 19 8 3 37	3 1	4 39 — — — —	5 40 76 32 21 8 20 4 5 5	t. 11·7 1·8 0·7 1·8

		_						
A. D.	. Hindu Month		l'ime		from Lan en as 6 A		unrise,	Number of
Year, Month,	and -	ph	atest ase.	Begin-		od of scuration.	End	twelfths celipsed.
and Day.	Current Śaka Year.	mer	mo- nt of noon]	ning of Eclipse.	Begin- ning.	End.	of Eclipse.	["t."=total
2	["w.m.i." = with mean intercalations.]	1	m.	h. m.	h. m.	h. m.	h. m.	eclipse.]
1	2		3	4	5	в	7	8
777 Mar. 28 Fri. 777 Sept. 21 Sun.	Chaitra	20 20	58 36	19 10 18 47	20 15 19 51	21 41 21 21	22 46 22 25	t.
778 Mar. 17 Tues. 778 Sept. 11 Fri.	Chaitra 701 Âśvina 701	21 10	49 36	20 12 8 57	10 29	10 43	23 26 12 15	11.5 t.
780 Jan. 26 Wcd.	Mûgha 702	8	27	7 18		_	9 36	4.7
780 July 21 Fri. 781 Jan. 14 Sun.	Śrâvaṇa	3 23	53 55	$\begin{array}{ccc} 2 & 59 \\ 22 & 5 \end{array}$	23 6	24 44	4 47 25 45	2·8 t.
781 July 10 Tues. 782 Jan. 4 Fri.	Śrâvana 704 Pausha 704	7 11	39 15	5 48 9 42	6 49	8 29	9 30 12 48	$\begin{array}{c} t. \\ 9 \cdot 9 \end{array}$
782 June 29 Sat.	Âshâdha	18	38	17 15		_	20 1	7.5 .
784 May 9 Sun. 784 Nov. 1 Mon.	Jyeshtha 707 Karttika 707	19 25	56 10	18 11 23 24	19 23 24 34	20 29 25 46	21 41 26 56	t.
785 Apr. 29 Fri. 785 Oct. 22 Sat.	Vaiśákha	5 13	42 38	3 59 11 53	5 15 13 5	$\begin{array}{ccc} 6 & 9 \\ 14 & 11 \end{array}$	7 25 15 23	t. t.
787 Mar. 8 Thur.	Chaitra, (w. m. i.) Chaitra 1 710	18	8	17 40	_	_	18 36	0.7
787 Sept. 2 Sun. 788 Feb. 26 Tues.	Bhâdrapada	8 2	46 58	7 59 1 8	2 11	3 45	$\begin{array}{ccc} 9 & 33 \\ 4 & 48 \end{array}$	2·1 · t.
788 Aug. 21 Thur. 789 Feb. 14 Sat.	Bhûdrapada 711 Phâlguna 711	14 17	33 31	12 43 15 52	13 47	15 19 —	16 23 19 10	t. 11·9
789 Aug. 10 Mon.	Bhâdrapada 712	15	4	13 31	-	-	16 37	10.0
790 Dec. 26 Sun. 791 June 20 Mon.	Pausha	7 18	52 25	7 3 16 57	_	-	8 41 19 53	2·3 8·6
791 Dec. 15 Thur. 792 June 9 Sat.	Pausha	10 11	23	8 13 9 32	9 18 10 33	10 44 12 13	11 49 13 14	t. t.
792 Dec. 3 Mon.	Margasirsha	9	0	7 22		_	10 38	11.8
793 May 30 Thur. 794 Oct. 13 Mon.	Jyeshtha	3 12	43 52	$\begin{array}{cc}2&43\\12&13\end{array}$	` 	_	4 43 13 31	3·5 1·4
795 Apr. 9 Thur. 795 Oct 3 Sat.	Vaiśákha	3 4	49 54	$\begin{bmatrix} 2 & 3 \\ 3 & 6 \end{bmatrix}$	$\begin{array}{ccc} 3 & 13 \\ 4 & 12 \end{array}$	4 25 5 36	5 35 6 42	t. t.
796 Mar. 28 Mon.	Chaitra 719	5	2	3 21	4 43	5 21	6 43	t.
796 Sept. 21 Wed. 798 Feb. 5 Mon.	Âśvina 719 Phâlguna, (w. m. i.) Phâlguna 1 720	18 17	33 4	16 52 15 58	18 14	18 52	20 14 18 10	t. 4·3
798 Aug. 1 Wed. 799 Jan. 26 Sat.	Śrâvaṇa	10 8	39 33	$\begin{array}{cc} 10 & 0 \\ 6 & 43 \end{array}$	7 44	9 22	11 18 10 23	1 · 4 t.
799 July 21 Sun.	Śrâvaṇa	14	38	12 48	13 50	15 26	16 28	t.
800 Jan. 15 Wed. 800 July 10 Fri.	Mâgha 722 Śrâvana 723	19 1	41 59	$\begin{array}{ccc} 18 & 8 \\ 0 & 28 \end{array}$	_	_	21 14 3 30	$10 \cdot 1$ $9 \cdot 4$
802 May 21 Sat. 802 Nov. 13 Sun.	Jyeshtha. 725 Mårgasirsha. 725	3 9	16 41	1 36 7 55	$\begin{array}{ccc} 3 & 0 \\ 9 & 5 \end{array}$	$\begin{bmatrix} 3 & 32 \\ 10 & 17 \end{bmatrix}$	$\begin{array}{ccc} 4 & 56 \\ 11 & 27 \end{array}$	t. t.
803 May 10 Wed.	Jycshtha726	12	38	10 52	12 2	13 14	14 24	t.
803 Nov. 2 Thur. 805 Sept. 12 Fri.	Kûrttika 726 Âśvina 728	22 16	16 28	20 31 15 53	21 42	22 50	$\begin{array}{ccc} 24 & 1 \\ 17 & 3 \end{array}$	t. 1·1
806 Mar. 8 Sun. 806 Sept. 1 Tues.	Chaitra, (w. m. i) Chaitra I	10 21	59 37	9 10 19 49	10 14 20 55	$\begin{array}{ccc} 11 & 44 \\ 22 & 19 \end{array}$	12 48 23 25	t. t.
807 Feb. 26 Fri.	Phâlguna	1	52	0 12	1 40	$egin{array}{cccc} 2 & 4 & & & \\ & \cdot & & & & \end{array}$	3 32	, t.
807 Aug. 21 Sat. 809 Jan. 5 Fri.	Bhâdrapada	21 16	56 16	20 19 15 27			23 33 17 5	11.4
809 July 1 Sun. 809 Dec. 25 Tues.	Ashâḍha 732 Pansha 732	1 18	50 2	0 30 16 14	17 19	18 45	3 10 19 50	6·9 t.
810 June 20 Thur.	Ashâḍha733	18	48	16 56	17 56	19 40	20 40	t.

ECLIPSES OF THE MOON IN INDIA.

A. D.	Hindu Month	Time		from Iaúl en as 6 A		unrisc,	Number of
Year, Month,	and	Greatest	Begin-		od of curation.	End	twelfths
	Current Saka Year,	fi.e. mo- ment of	ning of Edipor.	Begins	End.	of Eclipse.	eclipsed. ["t."=total
and Day.	[" 10, 10, f." in with mean intercalations.]	fallmoon) b. in.	lı, m.	h. m.	h. m.	h, m.	celipse.]
1	2	3	-1	5	8	7	8
\$10 Dec. 14 Set. \$11 June 10 Tues. \$12 Oct. 23 Set. \$13 Apr. 19 Tues. \$13 Oct. 13 Thur.	Pausha 783 Åshådha 784 Köritika 735 Vaifätha 786 Kirttike 736	17 9 11 2 21 20 10 35 13 26	15 29 9 51 20 54 8 52 11 59	16 5p	17 19 ————————————————————————————————————	18 49 10 13 22 4 12 18 15 13	t. 5·0 1·1 t. t.
\$14 Apr. \$ Sat. \$14 Oct. 3 Tuer. \$16 Feb. 17 San. \$17 Feb. 5 Thur. \$17 July \$1 Feb.	Valifakha	12 6 2 55 1 51 17 7 21 47	10 21 0 55 0 31 15 17 10 25	11 37 2 12 16 19 21 2	12 59 5 4 17 55 22 52	13 52 4 21 2 37 18 57 23 36	t. 1. 3.9 1. 1.
\$18 Jan, 26 Tact. \$18 July 21 Wed. \$20 May 31 Thor. \$20 Nov. 23 Fri. \$21 May 29 Mon.	Mecha 749 Seduno 741 Jacobila 743 Microstreba 743 Jacobila 743	4 1 9 24 10 26 1* 13 19 24	2 27 7 18 8 31 16 24 17 83	17 3× 14 10	15 30 30 5	3 35 11 0 12 1 20 0 21 13	10/3 10/9 10/7 t.
 S21 Nov. 13 Wed. S22 Nov. 2 Sun. S23 Sept. 24 Thur. S24 Mar. 18 Vri. S24 Sept. 12 Mon. 	Micrailecha, 743 Kärtifika 745 Äirina 746 Chaiten, 747 Äirina 747	22 47 10 17 14 54	5 19 0 6 17 7 3 7		7 35 19 36 5 :0	23 5 23 5 20 25 20 41 6 59	t. 0:3 0:1 t
525 Mar. 8 Wed. 925 Sept. 1 Fri. 827 Jan. 16 Wed. 827 July 12 Fri. 828 Jan. 6 Men.	Chaîtra, (w., m. i.) Chaitra 1	10 + 4 55 24 50 9 19 2 3	8 26 3 11 23 45 8 6 0 15	2 45 4 3-	10 52 5 12 2 45	11 50 6 36 45 15 10 52 3 51	t. 1-9 5-5
\$25 July 1 Wed. \$28 Dec. 24 Thur. \$29 June 20 Sun. \$30 Nov. 4 Fri. \$31 Apr. 30 Sun.	Åchfdla 731 Pavela 751 Åchfdla 752 Kfritika 753 Vallika 754	\$ 20 \$3 19 15 15 6 13 17 9	0 28 23 59 3 45 5 45 15 31	1 25 25 9	3 12 25 25	4 12 25 59 19 57 6 41 18 47	6. 6.6 0.7 11.8
 831 Oct. 24 Tacs. 832 Apr. 18 Thur. 832 Oct. 13 Sun. 833 Apr. 8 Tucs. 834 Pcb. 27 Pri. 	Kürtiika 751 Vaisikha 755 Kärttiia 755 Vaisikha 756 Philpuna 756	21 57 19 10 10 47 3 49 9 55	20 11 17 23 0 3 3 29 8 58	21 19 15 51 10 17	19 49		t. t. t. 0 1 3·1
\$35 Feb. 16 Taes, \$35 Aug. 12 Thur, \$36 Feb. 6 Snn, \$36 July 31 Mon, \$38 June 11 Taes,	Philipana 747 Bhi-drapista 735 Philipana 768 Schrana 759 Ashidha 761	25 80 5 3 12 8 16 57 17 86	23 49 3 16 10 31 15 17 16 6	24 43 4 23 16 45	26 17 5 43 17 9	27 20 6 50 13 42 18 37 19 6	t. 10+5 t. 9+0
838 Dec. 5 Thur. 839 June 1 San. 839 Nov. 24 Mon. 840 May 20 Thur. 840 Nov. 13 Sat.	Mörgadisha 761 Jyeshtha 762 Mörgadisha 762 Jyeshtha 763 Möngadisha 763	2 53 2 5 15 53 4 4 7 36	1 7 0 15 14 8 3 25 7 13	2 18 1 16 15 18	3 28 2 54 16 30	1 89 3 55 17 40 4 43 7 59	t. t. t. 1 · 4 0 · 5
842 Mar. 30 Thur. 842 Sept. 23 Sat. 843 Mar. 19 Mon. 813 Sept. 12 Wed. 845 Jan. 27 Tucs.	Chaiten 765 Aśvina 765 Chaiten 760 Áśvina 766 Māgha 767	2 40 12 18 18 17 12 6 8 38	0 54 10 83 16 83 10 23 7 58	2 3 11 45 17 46 11 38	3 17 12 51 18 49 12 31	4 26 14 3 20 1 13 49 9 18	t. t. t. 1·5

	Hindu Month	Time	measured tak	from Lan en as 6 A		unrisc,	Number of
A.D.	and	Greatest phase.	Degin-		od of scuration.	End	twelfths
Year, Month,	Current Śaka Year.	[i.e. mo- ment of	ning of Eclipse.	Begin-	End.	of Eclipse.	eclipsed. ["t."=total
and Day.	. ["w. m. i." = with mean intercalations.]	fullmoon h. m.	h. m.	h. m.	h. m.	h. m.	eclipse.]
1	2	3	4	5	в	7.	8
845 July 22 Wcd. 846 Jan. 16 Sat. 846 July 12 Mon. 847 Jan. 5 Wcd. 847 July 2 Sat.	Śrâ vaṇa 768 Mâgha. 768 Śrâ vaṇa 769 Pausha 769 Âshâḍha 770	16 49 10 0 9 52 9 26 1 34	15 44 8 13 8 1 7 46 0 7	9 18 9 2 9 12 —	10 42 10 42 9 40	17 54 11 47 11 43 11 6 3 1	4·1 t. t. t. 8·2
848 Nov. 14 Wed. 849 May 10 Fri. 849 Nov. 4 Mou. 850 Apr. 30 Wed. 850 Oct. 24 Fri.	Mûrgasîrsha 771 Jyeshtha 772 Kûrttika 772 Vaisûkha 773 Kûrttika 773	15 1 23 42 6 42 2 0 19 1	14 35 22 9 4 56 0 11 17 17	6 6 1 15 18 29	7 18 2 45 19 33	15 27 25 15 8 28 3 49 20 45	0.6 . 10-1 t. t. t.
851 Apr. 19 Sun. 852 Mar. 9 Wed. 853 Feb. 27 Mon. 853 Aug. 22 Tues. 854 Feb. 16 Fri.	Vaiśâkha. 774 Chaitra. 775 Phâlguna 775 Bhâdrapada 776 Phâlguna 776	11 11 18 11 9 42 12 23 20 9	10 .33 17 22 7 53 10 38 18 33	8 57 11 49	10 27 12 57 —	11 49 19 0 11 31 14 8 21 45	1·3 2·3 t. t. 11·1
854 Aug. 11 Sat. 856 June 21 Sun. 856 Dec. 15 Tues. 857 June 11 Fri. 857 Dec. 4 Sat.	Bhâdrapada. 777 Âshâḍha 779 Pausha 779 Âshâḍha 780 Mârgaśirsha 780	24 38 24 43 11 28 8 44 24 46	22 55 23 21 9 42 6 52 23 0	24 10 10 52 7 53 24 10	25 6 	26 21 26 5 13 14 10 36 26 32	t. 7·2 t. t. t.
858 May 31 Taes. 858 Nov. 24 Thur. 860 Apr. 9 Tues. 860 Oct. 3 Thur. 861 Mar. 30 Sun.	Jyeshtha 781 Mârgaśirsha 781 Vaiśākha 783 Âśvina 783 Chaitra 784	10 29 16 27 10 25 19 50 2 18	$\begin{bmatrix} 9 & 31 \\ 16 & 6 \\ 8 & 41 \\ 18 & 7 \\ 0 & 32 \end{bmatrix}$	9 54 19 24 1 41	10 56 20 16 2 55	11 27 16 48 12 9 21 33 4 4	3·3 0·4 t. t. t.
861 Sept. 22 Mon. 863 Feb. 7 Sun. 863 Aug. 2 Mon. 864 Jan. 27 Thur. 864 July 22 Sat.	Âśvina. 784 Phâlguna, (w. m. i.) Phâlguna I. 785 Śrâvaṇa. 786 Mûgha. 786 Śrâvaṇa. 787	19 27 16 38 24 28 17 53 17 28	17 42 16 7 23 35 16 6 15 38	18 52 ————————————————————————————————————	20 2 — 18 33 18 17	21 12 17 9 25 21 19 40 19 18	t. 0·9 2·7 t. t.
865 Jan. 15 Mon. 865 July 12 Thur. 866 Nov. 25 Mon. 867 May 22 Thur. 867 Nov. 15 Sat.	Mûgha. 787 Śrâvaņa. 788 Mûrgaśirsha. 789 Jyeshtha. 790 Mûrgaśirsha. 790	17 28 8 47 23 54 6 6 15 25	15 47 7 14 23 26 4 40 13 39	17 9 — — — 14 49	17 47 — — 16 1	19 '9 10 20 24 22 7 32 17 11	t. 10·0 0·7 8·0 t.
868 May 10 Mon. 868 Nov. 4 Thur. 869 Apr. 29 Fri. 870 Mar. 21 Tues. 871 Mar. 10 Sat.	Jyeshtha. 791 Kârttika 791 Vaiśâkha. 792 Chaitra. 793 Chaitra. 794	8 52 .3 22 18 32, 2 17 17 50	7 2 1 37 17 37 1 37 16 2	8 3 2 48 — — 17 8	9 41 3 56 — — 18 32	10 42 5 7 19 27 2 57 19 38	t. t. 2·9 1·5 t.
871 Sept. 2 Sun. 872 Feb. 28 Thur. 872 Aug. 22 Fri. 874 July 3 Sat. 874 Dec. 26 Sun.	Bhâdrapada. 794 Phâlguna 794 Bhâdrapada. 795 Âshâḍha. 797 Pausha 797	19 57 4 3 8 24 7 51 20 9	18 14 2 25 6 38 6 38 18 23	19 30 7 49 19 33	20 24 8 59 20 45	21 40 5 41 10 10 9 4 21 55	t. 11·8 t. 5·4 t.
875 June 22 Wed. 875 Dec. 16 Fri. 876 June 10 Sun. 876 Dec. 5 Wed. 878 Apr. 20 Sun.	Âshâdha 798 Pausha 798 Âshadha 799 Mûrgasîrsha 799 Vaisâkha 801	15 22 9 40 16 51 1 19 17 54	13 .30 7 54 15 39 0 58 16 13	14 30 9 4 — 17 34	16 14 10 16 — — 18 14	17 14 11 26 18 3 1 40 19 35	t. t. 5·2 0·4 t.

A. D. Year, Month, and Day. Current Saka Year.	twelfths celipsed, ["L"=total celipse.] 8 t. t. 0.1 0.5
Current Saka Year.	["L"=total cellpre.] 8 t. t. t. 0.1
The property of the part of	8 t. t. t. t.
1 2 3 4 5 6 7 \$78 Oct. 15 Wed. K5rttika. \$60 3 29 1 48 3 9 3 49 5 10 \$79 Apr. 10 Tri. Vaii3kha. \$60 10 6 8 18 9 24 10 45 11 54 \$79 Oct. 4 Sun. Å-sina. \$60 2 2 57 1 11 2 10 3 35 4 43 \$80 Mar. 30 Wed. Chaitra. \$60 2 2 57 1 11 2 10 3 35 4 43 \$80 Mar. 30 Wed. Chaitra. \$60 2 2 2 17 2 39	t. t. t. 0·1
S78 Oct. 15 Wed. Körtlika.	t. t. 0·1
S79 Oct. 4 Sun. Africa	t. 0·1
\$50 Mar. 30 Wed. Chaitra 503 2 24 2 17 - 2 39	0.1
	O.S.
	0.0
SSI Aug. 13 Sun. Bhidraphia	0·3 1·4
882 Feb. 6 Torn. Philippin, (r. 51, 1) Philippins L	1. 1.
SS3 Jan. 26 Sat. Magha	t.
\$83 July 23 Tars. \$\frac{\hat{\chi}}{\chi} \frac{\chi}{\chi} \frac	11 2 0·5
885 June 1 Toes, Jyeshibs 13 51	6.4
SS5 Nov. 23 Thur. Margastriba	t. t.
S56 Nov. 15 Tors. Margaliraha	t.
SS7 May 11 Thur. Jyeshtla	4 6 0 5
589 Mar. 20 Ther. Chaires	t.
890 Sept. 2 Wed. Bildrepads12 16 19 14 22 15 29 16 29 18 6	t. 1.
591 Aug. 23 Mcn. 116ffreindn	0 S 3·9
593 Jan. 6 Sat. Migha, (er. 98. 8) Partha II	١,
693 July 2 Mon. Ashlita	t. t.
694 June 21 Fri. Adadis 24 56	7 2
595 Dec. 16 Mon. Pancha	0-5 11-6
696 Oct. 25 Mon. Kerifia	t,
697 Apr. 20 Wed. Vairiskles	t. t.
898 Apr. 10 Mon. Vaissitha	1·1 1·3
809 Aug. 24 Fri. Bl.Mrspads	0.5
900 Feb. 18 Mon. Philyona	t,
901 Peb. 6 Pri. Philipana, (sr. es. i) Philipana 1 823 9 19 7 36 8 52 9 46 11 2	t.
201 Aug. 2 Sun. Srāvaus	t.
902 Dec. 17 Fri. Pausha	$\frac{0.5}{4.5}$
903 Dec. 7 Wed. Margastreha	t. t.
904 Nov. 25 Sun. Margadrsha	i.
905 May 21 Tues. Jyeshtha	6.0
907 Sept. 24 Thur. Asvinn	11 · p
908 Mar. 20 Sun. Chaitra	t. t.

	Hindu Month	Time	measured tak	from Land en as 6 A		unrise,	Number of
A. D. Year, Month,	and	Greatest phase.	Begin-	Peri	od of scuration.	End of	twelfths eclipsed.
and Day.	Current Śaka Year. ["w.m.i." = with mean intercalations.]	[i.e. mo- ment of fnll moor	Eclipse.	Begin- ning.	End.	Eclipse.	["t."=total
<u> </u>	2	h. m.	h. m.	h. m.	h. m.	h. m.	eelipse.]
909 Sept. 2 Sat.	Bhâdrapada	16 46	16 4		 	17 28	1.6
910 July 24 Tues. 911 Jan. 17 Thur.	Srâvaṇa	$egin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c cccc} 21 & 19 \\ 11 & 37 \\ 2 & 48 \end{array} $	12 47 3 50	13 57 5 26	22 55 15 7	2·2
911 July 14 Sun. 912 Jan. 7 Tucs.	Srâvaṇa 834 Mûgha, (w. m. i) Pausha II	3 22	1 36	2 46	3 58	6 28 5 8	t.
912 July 2 Thur. 912 Dec. 26 Sat.	Ashâḍha	5 38 19 4	4 8 18 41	_	_	7 8 19 27	8·9 0·5
914 May 12 Thur. 914 Nov. 5 Sat. 915 May 1 Mon.	Jyeshtha 837 Kârttika 837 Vaidala 838	$egin{array}{cccc} 8 & 57 \\ 19 & 9 \\ 25 & 37 \end{array}$	$\begin{array}{ c c c c }\hline 7 & 24 \\ 17 & 29 \\ 23 & 47 \\ \hline \end{array}$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	19 19 26 26	10 30 20 49 27 27	. 10·1 t. t.
915 May 1 Mon. 915 Oct. 25 Wed.	Vaiśâkha	18 21	16 33	17 38	19 4	20 9	t.
916 Apr. 20 Sat. 916 Oct. 13 Sun.	Vaiśákha 839 Kârttika 839	17 55 22 12	17 5 21 28			18 45 22 56	$\begin{array}{c} 2\cdot 4 \\ 1\cdot 8 \end{array}$
918 Feb. 28 Sat. 918 Aug. 24 Mon.	Phâlguna 840 Bhâdrapada 841	16 34 16 42	$\begin{array}{c cccc} 14 & 51 \\ 14 & 56 \end{array}$	16 6 16 6	$\begin{bmatrix} 17 & 2 \\ 17 & 18 \end{bmatrix}$	18 17 18 28	t. t.
919 Feb. 17 Wed. 919 Aug. 14 Sat.	Phâlguna 841 Bhâdrapada 842	$\begin{array}{ccc} 17 & 6 \\ 6 & 58 \end{array}$	15 22 5 14	16 34 6 27	17 38 7 29	18 50 8 42	t. t.
920 Dec. 28 Thnr. 921 June 23 Sat.	Pausha 843 Âshûḍha 844	2 37 1 25	2 14 0 33	_		$\begin{array}{ccc} 3 & 0 \\ 2 & 17 \end{array}$	0·5 2·6
921 Dec. 17 Mon. 922 June 12 Wed.	Pausha 844	17 54	16 9 3 34	17 19 4 35	18 29 6 15	19 39 7 16	t. t.
922 June 12 Wed. 922 Dec. 7 Sat. 923 June 1 Sun.	Âshâḍha 845 Mârgaśîrsha 845 Jyeshṭha 846	$\begin{array}{cccc} 5 & 25 \\ 4 & 47 \\ 16 & 29 \end{array}$	3 2 15 4	4 13	5 21	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	t. 7·9
925 Apr. 11 Mon. 925 Oct. 4 Tues.	Vaisakha 848 Asvina 848	17 10 19 - 36	15 28 17 59	16 47	17 33	18 52 21 13	t. 11·3
926 Apr. 1 Sat. 926 Sept. 24 Sun.	Chaitra	2 31 8 36	0 46 6 46	1 56 7 50	3 6 9 22	4 16 10 26	t. t.
927 Sept. 14 Fri. 928 Aug. 4 Mon.	Asvina 850 Šrâvaņa 851	0 53 5 22	0 2 4 59			1 44 5 45	2·5 0·5
929 Jan. 27 Tues.	Mâgha 851	21 52	20 7	21 19	22 25	23 37	t.
929 July 24 Fri. 930 Jan. 17 Sun. 930 July 13 Tues.	Śrâvaṇa. 852 Mâgha. 852 Śrâvaṇa. 853	$egin{array}{cccc} 11 & 19 \\ 12 & 11 \\ 12 & 8 \\ \end{array}$	9 31 10 25 10 33	10 37 11 34	12 1 12 48	$egin{array}{cccc} 13 & 7 \ 13 & 57 \ 13 & 43 \ \end{array}$	t. t. 10·8
931 Jan. 7 Fri. 932 May 22 Tues.	Stavația. 855 Mâgha. 853 Jyeshtha. 855	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3 32 14 52		_	4 14 17 48	0·4 8·5
932 Nov. 16 Fri.	Mârgaśirsha	3 6	1 28			4 44	11.7
933 May 12 Sun. 933 Nov. 5 Tues. 934 May 2 Fri.	Jyeshtha. 856 Kûrttika. 856 Vaisûkha. 857	$egin{array}{cccc} 9 & 10 \ 2 & 23 \ 1 & 22 \end{array}$	7 18 0 34 0 20	8 19 1 39.	$\begin{bmatrix} 10 & 1 \\ 3 & 7 \end{bmatrix}$	$egin{array}{cccc} 11 & 2 \ 4 & 12 \ 2 & 24 \ \end{array}$	t. t. 3·8
934 Oct. 25 Sat.	Kârttika857	6 24	5 36	_	_	7 12	2.2
936 Mar. 10 Thur. 936 Sept. 3 Sat.	Chaitra	23 48 24 36	22 7 22 52	23 29 24 6	$egin{array}{cccc} 24 & 7 \ 25 & 6 \ 25 & 21 \ \end{array}$	25 29 26 20	t. t. t.
937 Feb. 27 Mon. 937 Aug. 24 Thur. 938 Feb. 17 Sat.	Phâlguna 859 Bhâdrapada 860 Phâlguna 860	$egin{array}{cccc} 24 & 45 \ 14 & 31 \ 7 & 58 \ \end{array}$	22 59 12 45 7 47	24 9 13 55 —	25 21 15 7	$egin{array}{cccc} 26 & 31 \ 16 & 17 \ 8 & 9 \ \end{array}$	t, 0·1
939 Jan. 8 Tues.	Mågha, (10. m. i.) Mågha I 861	11 25	11 2	-	_	11 48	0.2
939 July 4 Thur. 939 Dec. 29 San. 940 June 22 Mon.	Ashâdha	7 57 2 40 12 15	7 27 0 55 10 25	$\begin{bmatrix} 2 & 7 \\ 11 & 27 \end{bmatrix}$	3 13 13 3	$\begin{array}{ccc} 8 & 27 \\ 4 & 25 \\ 14 & 5 \end{array}$. 0.8 t. t.
940 Dec. 17 Thur.	Pausha	13 19	11 34	12 44	13 54	15 4	t.

	. Ilindu Month	Time		from Lan		unrise,	Number of
A. D. Year, Month,	and	Greatest phase.	Begin-	4	od of curation.	End	twelfths
and Day.	Curreut Śaka Year.	[i.c.mo- ment of	ning of Eclipse.	Begin-	End.	of Eclipse.	celipsed. ["t."=total
and Day.	["w.m.i." = with mean interculations.]	fullmoon]	h. m.	h. m.	h. 111.	h. m.	eclipse.]
1	2	3	4	5	6	7	8
941 . June 11 Fri. 943 Apr. 22 Sat. 943 Oct. 16 Mon. 944 Apr. 11 Thur. 944 Oct. 4 Fri.	Âshâḍha 864 Vaiśākha 866 Kârttika 866 Vaiśākha 867 Âśvina 867	23 47 24 43 3 49 9 43 16 55	22 15 23 4 2 14 7 56 15 5	0 2 16 8	- - 10 24 17 42	25 19 26 22 5 24 11 30 18 45	9·6 11·9 10·8 t. t.
945 Sept. 24 Wed. 947 Feb. 8 Mon. 947 Aug. 4 Wed. 948 Jan. 28 Fri. 948 July 23 Sun.	Âśvina 868 Phâlgana 869 Śravana 870 Magha 870 Śravana 871	9 9 6 15 18 6 20 57 18 41	8 11 4 31 16 29 19 10 17 0	5 44 17 30 20 18 18 24	6 46 18 42 21 36 18 58	10 7 7 59 19 52 22 44 20 22	3·2 t. t. t.
949 Jan. 17 Wed. 950 June 2 Snn. 950 Nov. 27 Wed. 951 May 23 Fri. 951 Nov. 16 San.	Mågha. 871 Jveshtha. 873 Mårgaširsha 873 Jveshtha. 874 Mårgaširsha 874	12 36 23 46 11 7 16 43 10 21	12 13 22 25 9 30 14 51 8 32	- 15 51 9 36		12 59 25 7 12 44 18 35 12 10	0·5 7·0 11·5 t. t.
952 May 12 Wed. 952 Nov. 4 Thur. 954 Mar. 22 Wed. 954 . Sept. 15 Fri. 955 Mar. 11 Sun.	Jyeshtha. 875 Kûrttika. 875 Chaitra. 877 Aśvina. 877 Chaitra. 878	8 49 14 43 6 55 8 46 8 11	7 37 13 51 5 17 7 4 6 24	- 8 24 7 30	- 9 8 8 52	10 1 15 35 8 33 10 28 9 58	5·2 2·6 11·7 t. t.
955 Sept. 4 Taes. 956 Feb. 28 Thur. 957 Jan. 18 Sun. 958 Jan. 8 Fri. 958 July 3 Sat.	Bhùdrapada. \$78 Phâlguna \$78 Mûgha. \$79 Mûgha, (w. m. î.) Mûgha I. \$80 Âshûdha. \$81	22 11 16 1 20 15 11 24 19 9	20 24 15 30 20 0 9 39 17 20	21 30 — — 10 51 15 26	22 52 — — 11 57 19 52	23 58 16 32 20 30 13 9 20 58	t. 0·9 0·2 t. t.
958 Dec. 28 Tucs. 959 June 23 Thur. 961 May 3 Fri. 961 Oct. 26 Sat. 962 Apr. 22 Tucs.	Pausha 881 Âsha/lta 882 Vaiśâkha 884 Kârttika 884 Vaiśâkha 885	21 44 7 6 8 3 12 7 16 45	19 59 5 29 6 29 10 33 14 56	21 9 — — 16 0	22 10 — — 17 30	23 29 8 43 9 37 13 41 18 34	t. 11·2 10·3 10·4 t.
962 Oct. 15 Wcd. 963 Apr. 11 Sat. 963 Oct. 5 Mon. 965 Feb. 18 Sat. 965 Ang. 14 Mon.	Kârttika \$85 Vaiśûkha \$86 Âśvina \$86 Phâlguna \$87 Bhâdrapada \$88	25 24 18 40 17 28 14 31 24 58	23 34 18 19 16 25 12 48 23 15	24 35 — — 14 3 24 33	26 13 ———————————————————————————————————	27 14 19 1 18 31 16 14 26 41	t. 0·4 3·9 t. t.
966 Feb. 8 Thur. 966 Aug. 3 Fri. 967 Jan. 28 Mon. 968 June 13 Sat. 968 Dec. 7 Mon.	Phâtguna 888 Śrâvana 859 Mâgha 859 Ashâdha 891 Mârgasîrsha, (w. m. i.) Mârgasîrsha II. 891	5 29 25 18 21 16 7 4 19 10	3 42 23 33 20 46 5 52 17 33	4 48 24 45 — — —	6 10 25 51 — —	7 16 27 3 21 46 8 16 20 47	t. t. 0.8 5.3 11.3
969 June 2 Wed. 969 Nov. 26 Fri. 970 May 23 Mon. 970 Nov. 15 Tues. 972 Apr. 1 Mon.	Jyeshtha. 892 Mårgasirsha 892 Jyeshtha. 893 Mårgasirsha 893 Chaitra. 895	24 12 18 25 16 7 23 7 13 54	22 20 16 36 14 47 22 11 12 20	23 20 17 40 — —	25 4 19 10 -	26 4 20 14 17 27 24 3 15 28	t. t. 6·8 3·0 10·5
972 Sept. 25 Wed. 973 Mar. 21 Fri. 973 Sept. 15 Mon. 974 Mar. 10 Tues. 976 Jan. 19 Wed.	Âśvina 895 Chaitra 896 Âśvina 896 Chaitra 897 Mâgha 898	16 55 15 37 5 55 23 59 20 2	15 16 13 48 4 6 23 16 18 18	16 55 14 52 5: 10 	16 55 16 22 6 40 	18 34 17 26 7 44 24 42 21 46	t. t. t. 1.7 t.

	llindu Month	Time	measured tak	from Lank en as 6 A.	n mean si	ınrise,	Number of
A. D.	ban ·	Greatest	Begin-	Perio total obs		End	twelfths
Year, Month,	Current Śaka Year.	[i.c. mo- ment of	ning of Eclipse.	Begin-	End.	of Eclipsc.	cclipscd. ["t."=total
and Day.	["w.m.i." = with mean intercalations.]	h. m.	lı. m.	ning. h. m.	h. m.	h. m.	celipse.]
1	2	3	4	5	в	7	8
976 July 14 Fri. 977 Jan. 8 Mon. 977 July 3 Tues. 979 May 14 Wed. 979 Nov. 6 Thur.	Śrâvaņa 899 Mâgha, (w. m. i.) Mâgha I 899 Âshâḍha 900 Jycshtha. 902 Kârttika 902	2 7 6 8 14 27 15 22 20 36	0 21 4 23 12 45 13 53 19 2	1 30 5 33 14 5 —	2 44 6 43 14 49	3 53 7 53 16 9 16 51 22 10	t. t. t. 8·8 10·3
980 May 2 Sun. 980 Oct. 26 Tucs. 981 Apr. 22 Fri. 981 Oct. 16 Sun. 983 Mar. 1 Thur.	Vaiśūkha. 903 Kārttika. 903 Vaiśūkha. 901 Kārttika. 904 Phâlguna. 905	23 37 10 1 1 23 1 57 22 40	21 47 8 11 0 36 0 51 20 58	22 48 9 12 — 22 17	24 26 10 50 — 23 3	25 27 11 51 2 10 3 3 24 22	t. t. 2·1 4·3 t.
983 Aug. 26 Snn. 984 Fcb. 19 Tucs. 984 Aug. 14 Thur. 985 Feb. 8 Sun. 985 Aug. 3 Mon.	Bhûdrapada. 906 Phâlgnna. 906 Bhûdrapada. 907 Phâlguna. 907 Śrâvaṇa. 908	7 54 13 58 8 6 5 49 11 30	6 16 12 10 6 19 5 14 11 15	13 15 7 26 —	14 41 8 46 —	9 32 15 46 9 53 6 24 11 45	11·8 t. t. 1·1 0·2
986 June 24 Thur. 986 Dec. 19 Sun. 987 June 14 Tues. 987 Dec. 8 Thur. 988 June 2 Sat.	Ashâdha 909 Pausha 909 Âshâdha 910 Mârgaśirsha, (w. m. i) Mârgaśirsha II. 910 Jyeshtha 911	14 31 3 14 7 40 2 30 23 24	13 29 1 38 5 49 0 49 21 56	6 50 1 53	8 30 3 25 —	15 33 4 50 9 31 4 29 24 52	3·7 11·1 t. t. 8·5
988 Nov. 26 Mon. 990 Apr. 12 Sat. 990 Oct. 6 Mon. 991 Apr. 1 Wed. 991 Sept 26 Sat.	Mûrgaśîrsha 911 Vniśâkha 913 Aśvina 913 Chaitra 914 Âśvina 914	7 40 20 46 25 16 22 54 13 48	6 43 19 16 23 39 21 4 11 58	22 6 13 2	23 42 14 34	8 37 22 16 26 53 24 44 15 38	3·1 9·1 11·5 t. t.
992 Mar. 21 Mon. 992 Sept. 14 Wed. 994 Jan. 30 Tnes. 994 July 25 Wed. 995 Jan. 19 Sat.	Chaitra 915 Âśvina 915 Mâgha 916 Śrâvaŋa 917 Mâgha 917	7 49 19 27 4 37 9 15 14 24	6 55 18 59 2 53 7 32 12 38	- 4 7 8 48 13 48	5 7 9 42 15 0	8 43 19 55 6 21 10 58 16 10	2·8 0·7 t. t. t.
995 July 14 Sun. 997 May 24 Mon. 997 Nov. 17 Wed. 998 May 14 Sat. 998 Nov. 6 Sun.	Śrâvana. 918 Jycshtha. 920 Mârgaśîrsha. 920 Jycshtha. 921 Kârttika. 921	21 52 22 34 5 9 6 26 18 46	20 7 21 13 3 35 4 34 16 56	21 18 — . 5 35 17 57	22 26 — 7 17 19 35	23 37 23 55 6 43 8 18 20 36	t. · 7·0 · 10·2 · t. · t.
999 May 3 Wcd. 999 Oct. 27 Fri. 1001 Mar. 12 Wcd. 1001 Sept. 5 Fri. 1002 Mar. 1 Sun.	Vaiśákha. 922 Kârttika. 922 Chaitra. 924 Bhâdrapada. 924 Phâlguna. 924	7 56 10 36 6 45 15 1 22 20	6 54 9 28 5 5 13 26 20 31	6 33 21 35	- 6 57 23 5	8 58 11 44 8 25 16 36 24 9	3·7 4·6 t. 10·6 t.
1002 Aug. 25 Tnes. 1003 Fcb. 19 Fri. 1003 Aug. 14 Sat. 1004 July 4 Tues. 1004 Dec. 29 Fri.	Bhâdrapada. 925 Phâlguna 925 Bhâdrapada 926 Âshâdha 927 Pausha 927	15 1 14 15 18 41 21 56 11 18	13 12 13 32 17 57 21 10 9 43	14 16 — — — —	15 46 — — — —	16 50 14 58 19 25 22 42 12 53	t. 1·7 1·8 2·0 . 10·8
1005 June 24 Sun. 1005 Dec. 18 Tncs. 1006 June 14 Fri. 1006 Dec. 7 Sat. 1008 Apr. 23 Fri:	Ashâdha 928 Pansha 928 Âshâdha 929 Mârgaśîrsha, (w. m. i.) Mârgaśîrsha II 929 Vaiśâkha 931	15 10 10 52 6 37 16 11 3 28	13 20 9 2 5 4 15 13 2 5	14 22 10 6 — —	15 58 11 38 — — —	17 0 12 42 8 10 17 9 4 51	t. t. 10·1 3·2 · 7·5

1.2	Hindu Month	Time		from Laúl en as 5 A		unrise,	Number of
A.D.	and	Greatest phase.	Begin-	Perio	od of curation.	End	twelfths
Year, Month, and Day.	Current Śaka Year.	[i.e. mo- ment of	ning of Eclipse.	Begin- ning.	End.	of Eclipse.	celipsed. ["t."= total
and Day.	["w.m.i." = with mean intercalations.]	fnllmoon] li. m.	h. m.	h. m.	h. nı.	h. m.	eelipse.]
1	2	3	4	5	6	7	8
1008 Oct. 17 Sun. 1009 Apr. 12 Tues. 1009 Oct. 6 Thur. 1010 Apr. 1 Sat. 1010 Sept. 26 Tues.	Kârttika 931 Vaiśâkha. 932 Âśvina 932 Chaitra. 933 Âśvina 933	9 47 6 7 21 46 15 35 2 54	8 11 4 16 19 56 14 31 2 12	5 17 20 58 —	6 57 22 34 —	11 23 7 58 23 36 16 39 3 36	11.0 t. t. 4.0 1.6
1012 Feb. 10 Sun. 1012 Aug. 4 Mon. 1013 Jan. 29 Thur. 1013 July 25 Sat. 1014 July 14 Wed.	Phâlguna. 934 Śrâvaṇa. 935 Mâgha. 935 Śrâvaṇa. 936 Śrâvaṇa. 937	13 3 16 31 22 38 5 23 22 12	11 20 14 52 20 52 3 36 21 51	12 36 16 24 22 1 4 42	13 30 16 38 23 15 6 4	14 46 18 10 24 24 7 10 22 33	t. t. t. 0,4
1015 June 5 Sun. 1015 Nov. 28 Mon. 1016 May 24 Thur. 1016 Nov. 17 Sat. 1017 May 13 Mon.	Jyeshtha 938 Mårgašîrsha 938 Jyeshtha 939 Mårgašîrsha 939 Jyeshtha 940	5 39 13 46 13 8 3 31 14 29	4 27 12 13 11 16 1 40 13 16	$\begin{bmatrix} - \\ 12 & 16 \\ 2 & 41 \\ - \end{bmatrix}$	$\begin{array}{cccc} - & - & - & - & - & - & - & - & - & - $	6 51 15 19 15 0 5 22 15 42	5·2 10·0 t. t. 5·4
1017 Nov. 6 Wed. 1019 Mar. 23 Mon. 1019 Sept. 16 Wed. 1020 Mar. 12 Sat. 1020 Sept. 4 Sun.	Kârttika 940 Chaitra 942 Âśvina 942 Chaitra 943 Bhâdrapada 943	19 22 14 45 22 16 6 35 22 7	18 12 13 8 20 45 4 45 20 17	 5 48 21 19	7 22 22 55	20 32 16 22 23 47 8 25 23 57	4·9 11·3 9·4 t. t.
1021 Mar. 1 Wed. 1021 Aug. 25 Fri. 1022 July 16 Mon. 1023 Jan. 9 Wed. 1023 July 5 Fri.	Phâlguna 943 Bhâdrapada 944 Śrâvana 945 Mûgha 945 Âshâdha 946	22 32 2 4 5 28 19 16 22 38	21 43 1 8 4 58 17 41 20 49	21 54		23 21 3 0 5 58 20 51 24 27	2·3 3·0 0·8 10·7 t.
1023 Dec. 29 Sun. 1024 June 24 Wed. 1024 Dec. 17 Thur. 1026 May 4 Wed. 1026 Oct. 28 Fri.	Pansha 946 Âshâḍha 947 Pausha 947 Vaiśākha 949 Kârttika 949	19 5 13 49 24 49 10 5 -18 18	17 15 12 11 23 50 8 50 16 44	18 18 — — — —	19 52 — — —	20 55 15 27 25 48 11 20 19 52	t. 11·7 3·4 5·8 10·5
1027 Apr. 23 Sun. 1027 Oct. 18 Wed. 1028 Apr. 11 Thnr. 1028 Oct. 6 Sun. 1030 Feb. 20 Fri.	Vaiśâkha. 950 Kârttika. 950 Vaiśâkha. 951 Âśvina. 951 Phâlguna. 952	13 11 5 56 23 10 10 30 21 21	11 19 4 6 21 58 9 42 19 39	12 20 5 7. — 20 59	14 2 6 45 — 21 43	15 3 7 46 24 22 11 18 23 3	t. t. 5.3 2·2 t.
1030 Aug. 15 Sat. 1031 Feb. 10 Wed. 1031 Aug. 5 Thur. 1032 July 25 Tues. 1033 June 15 Fri.	Bhâdrapada. 953 Phâlguna. 953 Śrâvaṇa. 954 Śrâvaṇa. 955 Âshâdha. 956	23 51 6 38 12 59 5 48 12 44	22 15 4 51 11 9 5 3 11 46	5 59 12 13 —	7 17 13 45 —	25 27 8 25 14 49 6 33 13 42	10·9 t. t. 1·9 3·3
1033 Dec. 8 Sat. 1034 June 4 Tues. 1034 Nov. 28 Thur. 1035 May 24 Sat. 1035 Nov. 18 Tues.	Pausha, (w. m. i.) Pausha I. 956 Jyeshtha. 957 Mûrgasîrsha 957 Jyeshtha. 958 Mûrgasîrsha 958	22 28 19 43 12 23 20 54 4 4	20 54 17 52 10 32 19 31 2 53	18 53 11 33 —	20 33 13 13 —	24 2 21 34 14 14 22 17 5 15	10·2 t. t. 7·4 5·1
1037 Apr. 2 Sat. 1037 Sept. 27 Tucs. 1038 Mar. 23 Thur. 1038 Sept. 16 Sat. 1039 Mar. 13 Tucs.	Chaitra 960 Âśvina 960 Chaitra 961 Âśvina 961 Chaitra 962	$\begin{array}{cccc} 22 & 29 \\ . & 5 & 34 \\ 14 & 41 \\ 5 & 20 \\ 6 & 36 \end{array}$	20 55 4 6 12 51 3 29 5 41	13 52 4 30	15 30 6 10	$\begin{bmatrix} 24 & 3 \\ 7 & 2 \\ 16 & 31 \\ 7 & 11 \\ 7 & 31 \end{bmatrix}$	10·4 8·6 t. t. 2.9

4.70	Hindu Month	Time		from Lank en as 6 A.		unrise,	Number of
A. D. Year, Month,	· and	Greatest phase.	Begin-	Perio		End	twelfths eelipsed.
and Day.	Current Śaka Year.	{i.e. mo- ment of fullmoon	ning of Eclipse.	Begin- ning.	End.	of Eclipse.	["t."=total
and Day.	["w.m.i." = with mean intercalations.]	h. m.	h. m.	h. m.	h. m.	h. m.	eclipse.]
1	2	3	4	5	6	7	8
1039 Sept. 5 Wed. 1041 Jan. 20 Tues. 1041 July 16 Thur. 1042 Jan. 9 Sat. 1042 July 5 Mon.	Bhâdrapada 962 Mâgha 963 Śrâvaṇa 964 Mâgha 964 Âshâḍha 965	9 30 3 11 6 9 3 13 20 59	8 26 1 37 4 23 1 23 19 17	5 31 2 27 20 35	$\begin{array}{ccc} - & - \\ 6 & 47 \\ 3 & 59 \\ 21 & 23 \end{array}$	10 34 ·4 45 7 55 5 3 22 41	4·0 10·5 t. t. .t.
1042 Dec. 29 Wed. 1044 May 14 Mon. 1044 Nov. 8 Thur. 1045 May 3 Fri. 1045 Oct. 28 Mon.	Pausha 965 Jyeshtha 967 Kârttika, (w.m.i.) Karttika II 967 Vaiśâkha 968 Kârttika 968	9 26 16 38 2 54 20 7 14 5	8 26 15 33 1 20 18 15 12 15	- - 19 15 13 16	20 59 14 54	10 26 17 43 4 28 21 59 15 55	3·5 4·2 10·2· t. t.
1046 Apr. 23 Wed, 1046 Oct. 17 Fri. 1048 Mar. 3 Thur. 1048 Ang. 26 Fri, 1049 Feb. 20 Mon.	Vaiśâkha. 969 Kârttika. 969 Phâlguna. 970 Bhâdrapada. 971 Phâlguna. 971	6 44 18 13 5 32 7 23 14 35	5 25 17 20 3 52 5 51 12 48	5 18 - 13 53	5 46 15 17	8 3 19 6 7 12 8 55 16 22	6·6 2·7 t. 9·6 t.
1049 Aug. 15 Tues. 1050 Aug. 5 Sun. 1051 June 26 Wed. 1051 Dec. 20 Fri. 1052 June 15 Mon.	Bhâdrapada 972 Śrâvaṇa 973 Âshâḍha 974 Pausha 974 Âshâḍha 975	20 43 13 28 19 45 7 11 2 16	18 53 12 30 19 2 5 38 0 26	19 54 — — — 1 29	21 32 — — — 3 3	22 33 14 26 .20 28 8 44 4 6	t. 3·2 1·7 10·0 t.
1052 Dec. 8 Tues. 1053 June 4 Fri. 1053 Nov. 28 Sun. 1055 Apr. 14 Tues. 1055 Oct. 8 Sun.	Mârgaśîrsha, (w. m. i.) Pausha I 975 Jyeshtha. 976 Mârgaśîrsha. 976 Vaiśâkha. 978 Âśvina 978	21 16 3 21 12 51 6 15 13 6	19 25 1 50 11 40 4 44 11 42	20 26 — — — —	22 6	23 7 4 52 14 2 7 46 14 30	t. 9·4 5·0 9·3 7·7
1056 Apr. 2 Tues. 1056 Sept. 26 Thur. 1057 Mar. 23 Sun. 1057 Sept. 15 Mon. 1059 Jan. 31 Sun.	Chaitra 979 Âśvina 979 Chaitra 980 Âśvina 980 Mâgha 981	22 41 12 44 14 31 17 12 10 57	20 50 10 53 13 29 16 1 9 24	21 51 11 54 — — —	23 31 13 34 — — —	24 32 14 35 15 33 18 23 12 30	t. t. 3·8 5·0 9·9
1059 July 27 Tues. 1060 Jan. 20 Thur. 1060 July 16 Sun. 1061 Jan. 8 Mon. 1062 May 25 Sat.	Śrâvana 982 Mâgha. 982 Śrâvana. 983 Mâgha. 983 Jyeshṭha. 985	13 45 11 18 4 10 18 0 23 7	12 1 9 28 2 24 16 58 22 18	13 15 10 30 3 35 —	14 15 12 6 4 45 .—	15 29 13 8 5 56 19 2 23 56	t. t. t. 3.7 2.3
1062 Nov. 19 Tues. 1063 May 15 Thur. 1063 Nov. 8 Sat. 1064 May 3 Mon. 1064 Oct. 28 Thur.	Mârgaśirsha 985 Jyeshtha 986 Kârttika, (w. m. i.) Kârttika II 986 Vaiśâkha 987 Kârttika 987	11 41 3 5 22 24 14 10 1 59	10 8 1 14 20 34 12 43 1 2	2 15 21 35 —	3 55 23 13 —	13 14 4 56 24 14 15 37 2 56	·10·1 t. t. 8·3 3·1
1066 Mar. 14 Tues. 1066 Sept. 6 Wed. 1067 Mar. 3 Sat. 1067 Aug. 27 Mon. 1068 Feb. 20 Wed.	Chaitra 989 Bhâdrapada 989 Phâlguna 989 Bhâdrapada 990 Phâlguna 990	13 31 15 2 22 19 4 34 24 0	11 54 13 34 20 30 2 43 23 32	21 35 3 44 —	$\begin{bmatrix} - \\ 23 & 3 \\ 5 & 24 \\ - \end{bmatrix}$	15 8 16 30 24 ·8 6 25 24 28	11·4 8·6 t. t. 0·7
1068 Ang. 15 Fri. 1069 Dec. 30 Wed. 1070 June 26 Sat. 1070 Dec. 20 Mon. 1071 June 15 Wed.	Bhâdrapada. 991 Pausha. 992 Âshâḍha. 903 Pansha. 993 Âshâḍha. 994	21 18 15 52 8 48 6 9 9 44	20 11 14 19 7 1 4 18 8 7	8 7 5 19	9 29 6 59	22 25 17 25 10 35 8 0 11 21	4·4 10·1 t. t. 11·2

A. D.	Hindu Month	Time		from Laul en as 6 A		unrise,	Number of
Year, Month,	and	Greatest	Degin-		od of curation.	End	twelfths eclipsed.
	Current Śaka Year.	[i.e. mo- ment of	ning of Eclipse.	Begin-	End.	of Eelipse.	["t."= total
and Day.	["w.m.i." = with mean intercalations.]	h. m.	h. m.	h. m.	h. m.	h. m.	eclipse.]
1	2	3	4	5	6	7	8
1071 Dec. 9 Fri. 1073 Apr. 24 Wed. 1073 Oct. 18 Fri. 1074 Apr. 14 Mon. 1074 Oct. 7 Tues.	Mârgaśîrsha, (w. m. i.) Pausha I. 994 Vaiśâkha. 996 Kârttika. 996 Vaiśâkha. 997 Âśvina. 997	21 42 13 51 20 46 6 29 20 21	20 31 12 26 19 25 4 37 18 29	5 38 19 30	7 20 21 12	22 53 15 16 22 7 8 21 22 13	5·1 7·9 7·0 t. t.
1075 Apr. 3 Fri. 1075 Sept. 26 Sat. 1077 Feb. 10 Fri. 1077 Aug. 6 Sun. 1078 Jan. 30 Tues.	Chaitra 998 Âśvina 998 Phâlguna 999 Śrâvaṇa 1000 Mâgha 1000	22 21 25 2 18 41 21 21 19 21	21 11 23 46 17 9 19 41 -17 31	21 9 18 32	21 33 20 10	23 31 26 18 20 13 23 1 21 11	4·8 6·0 9·6 t. t.
1078 July 27 Fri. 1079 Jan. 20 Sun. 1080 June 5 Fri. 1080 Nov. 29 Sun 1081 May 25 Tues.	Śrâvana. 1001 Mâgha. 1001 Jyeshtha. 1003 Mârgaśirsha 1003 Jyeshtha. 1004	11 25 2 29 5 36 20 22 10 3	9 37 1 25 5 15 18 50 8 13	10 43 — — 9 15	12 7 — — 10 51	13 13 3 33 5 57 21 54 11 53	t. 4·0 0·4 9·8 t.
1081 Nov. 19 Fri. 1082 May 14 Sat. 1082 Nov. 8 Tues. 1084 Mar. 24 Sun. 1084 Sept. 16 Mon.	Mårgaširsha 1004 Jyeshtha. 1005 Kårttika, (w. m. i.) Kårttika II 1005 Chaitra. 1007 Åsvina 1007	6 46 21 33 9 55 21 23 22 53	4 55 20 1 8 57 19 49 21 28	5 56 — — — —	7 36 — — —	8 37 23 5 10 53 22 57 24 18	t. 9·7 8·3 10·4 7·8
1085 Mar. 14 Fri. 1085 Sept. 6 Sat. 1086 Mar. 3 Tues. 1086 Aug. 27 Thur. 1088 Jan. 10 Mon.	Chaitra 1008 Bhâdrapada 1008 Phâlguna 1008 Bhâdrapada 1009 Mâgha 1010	5 52 12 31 7 23 5 12 24 34	4 2 10 39 6 43 3 59 23 1	5 5 11 40 — — —	6 39 13 22 — —	7 42 14 23 8 3 6 25 26 7	t. t. 1·5 5·5 10·0
1088 July 6 Thur. 1088 Dec. 30 Sat. 1089 June 25 Mon. 1089 Dec. 20 Thur. 1091 May 5 Mon.	Âshâḍha 1011 Pausha 1011 Âshâḍha 1012 Pausha 1012 Vaiśâkha 1014	15 19 15 3 16 3 6 35 21 26	13 35 13 12 14 20 5 24 20 8	14 48 14 13 15 38 —	15 50 15 53 16 28	17 3 16 54 17 46 7 46 22 44	t. t. 5·0 6·4
1091 Oct. 30 Thur. 1092 Apr. 24 Set. 1092 Oct. 18 Mon. 1093 Apr. 14 Thur. 1093 Oct. 7 Fri.	Kârttika 1014 Vaiśákha 1015 Kârttika 1015 Vaiśákha 1016 Âsvina 1016	4 30 14 15 4 7 6 2 9 1	3 12 12 23 2 15 4 47 7 42	13 23 3 15 —	15 7 4 59 —	5 48 16 7 5 59 7 17 10 20	6.5 t. t. 5.9 6.7
1095 Feb. 22 Thur. 1095 Ang. 18 Sat. 1096 Feb. 11 Mon. 1096 Aug. 6 Wed. 1097 Jan. 30 Fri.	Phâlguna 1017 Bhâdrapada 1018 Phâlguna 1018 Śrâvaṇa 1019 Mâgha 1019	2 11 5 2 3 15 18 42 10 54	0 41 3 26 1 25 16 52 9 48	2 26 17 56	 4 4 19 28 	3 41 6 38 5 5 20 32 12 0	8·9 11·0 t. t. 4·3
1098 Dec. 11 Sat. 1099 June 5 Sun. 1099 Nov. 30 Wed. 1100 May 25 Fri. 1100 Nov. 18 Sun.	Pausha 1021 Jyeshtha 1022 Mârgasîrsha 1022 Jyeshtha 1023 Mârgasîrsha 1023	5 8 16 54 15 7 4 58 17 56	3 35 15 6 13 17 3 21 16 56	16 12 14 18 	17 36 15 56	6 41 18 42 16 57 6 35 18 56	9·9 t. t. 11·5 3·5
1102 Apr. 5 Sat. 1102 Sept. 28 Sun. 1103 Mar. 25 Wed. 1103 Sept. 17 Thur. 1104 Mar. 13 Sun.	Chaitra 1025 Âśvina 1025 Chaitra 1026 Âśvina 1026 Chaitra 1027	5 2 6 49 13 13 20 40 14 38	3 31 5 29 11 23 18 48 13 49	12 24 19 48	$\begin{bmatrix} -1 & 2 & 2 & 32 & -1 & -1 & -1 & -1 & -1 & -1 & -1 & -$	6 33 8 9 15 3 22 32 15 27	9·2 6·9 t. t. 2·3

A D	lliudu Month	Time	measured tak	from Laúl en as 6 A		uurise,	Number of
A. D. Year, Month,	and	Greatest phase.	Begin-		od of seuration.	End	twelfths eclipsed.
and Day.	Current Saka Year. [" w . m . i " = with mean intercalations.]	[i.c. mo· ment of full moon]	ning of Eclipse.	Begin- ning.	End.	of Eclipse.	["t."=total
	2	h. m.	h. m.	h. m.	h. m.	h. m.	eclipsc.]
1 1104 Sept. 6 Tues	Bhâdrapada 1027	13 10	11 52	5	6	7 14 28	6.5
1106 Jan. 21 Sun. 1106 July 17 Tucs.	Mûgha 1028 Śrâvaṇa 1029	9 10 21 57	7 37 20 17	21 43	22 11	10 43 23 37	10·0 t.
1107 Jan. 10 Thur. 1107 July 6 Sat.	Mågha	23 58 22 32	22 7 20 46	23 8 21 56	24 48 23 8	25 49 24 18	t. t.
1107 Dec. 31 Tues. 1109 May 16 Sun.	Måglia	15 24 4 55	14 14 3 43	_	<u> </u>	16 34 6 7	$4 \cdot 9$ $5 \cdot 2$
1109 Nov. 9 Tucs. 1110 May 5 Thur.	Kârttika. 1032 Vaiśâkha. 1033 Kârttiku. 1033	12 25 21 56 11 58	$egin{array}{cccc} 11 & 9 \ 20 & 4 \ 10 & 6 \end{array}$	21 5 11 7	22 47	13 41 23 48	6·0 t.
1110 Oct. 29 Sat. 1111 Apr. 25 Tues.	Kârttiku 1033 Vaiśâkhn 1034	13 39	12 16		12 49	13 50 15 2	1. 7·4
1111 Oct. 18 Wed. 1113 Mar. 4 Tues.	Kârttika 1034 Phâlguna 1035	.17 10 9 36	15 48 8 10	=	_	18 32 11 2	7·3 8·1
1113 Aug. 28 Thur. 1114 Feb. 21 Sat.	Bhûdrapada	12 25 11 0	11 22 9 9	10 10	11 50	14 28 12 51	9·9 t.
1114 Aug. 18 Tues. 1115 Feb. 10 Wed.	Bhâdrapada	2 8 19 13	0 18 18 4	1 19 —	2 57	3 58 20 22	t. 4·7
1115 Aug. 7 Sat. 1116 Dec. 21 Thur. 1117 June 15 Fri.	Śrâvana. 1038 Pausha 1039 Âshâdha 1040	8 33 13 55 23 52	7 57 12 23 22 6	23 17	24 27	9 9 15 27 25 38	1 · 2 9 · 7 t.
1117 Dec. 10 Mon.	Pausha	23 34	21 43	22 44	24 24	25 25	t.
1118 June 5 Wed. 1118 Nov. 30 Sat.	Jycshtha. 1041 Mârgasîrsha. 1041 Valdelle. 1042	12 16 1 57 12 38	10 33 0 56 11 13	11 51	12 41	13 59 2 58 14 3	t. 3·6 7·9
1120 Apr. 15 Thar. 1120 Oct. 8 Fri.	Vaišākha	12 38 15 0	11 13 13 42	. –	=	16 18	6.4
1121 Apr. 4 Mou. 1121 Sept. 28 Wed.	Chaitra	20 29	18 38	$\begin{array}{ccc} 19 & 39 \\ 4 & 2 \end{array}$	21 19 5 46	22 20	t. t.
1122 Mar. 24 Fri 1122 Scpt. 17 Sun. 1124 Feb. 1 Fri.	Chaitra	21 45 21 16 17 41	$ \begin{array}{ccc} 20 & 45 \\ 19 & 54 \\ 16 & 9 \end{array} $			22 45 22 38 19 13	3·5 7·3 9·7
1124 July 28 Mon.	Śrâvaṇa	4 35	3 0			6 10	10.6
1125 Jan. 21 Wed. 1125 July 17 Fri. 1126 Jan. 10 Sun.	Mûghn 1047 Śrâvaṇa 1048 Mûghn 1048	8 42 5 8 24 9	$egin{array}{cccc} 6 & 51 \ 3 & 19 \ 22 & 58 \ \end{array}$	7 52 4 25	9 32 5 51	10 33 6 57 25 20	t. t. 5·0
1126 July 6 Tues.	Âshāḍha1049	8 50	8 19	-	_	9 21	0.9
1127 May 27 Fri. 1127 Nov. 20 Sun. 1128 May 16 Wed.	Jyeshtha1050Margasirsha1050Jyeshtha1051	12 23 20 19 5 30	$egin{array}{cccc} 11 & 23 \ 19 & 4 \ 3 & 39 \ \end{array}$. — 4 40		$ \begin{array}{cccc} 13 & 23 \\ 21 & 34 \\ 7 & 21 \end{array} $	3·5 5·9 t.
1128 Nov. 8 Thur. 1129 May 5 Sun.	Kârttika	19 58 21 3	18 6 19 34	19 7	20 49	21 50 22 32	t. 8·8
1129 Oct. 29 Tues. 1131 Mar. 15 Sun.	Kûrttika	1 28 16 50	0 4 15 30	_	_	2 52 18 10	7·6 6·9
1131 Sept. 8 Tues. 1132 Mar. 3 Thur.	Bhâdrapada	20 53 18 45	19 24 16 53			22 22 20 37	8 · 7 t.
1132 Aug. 28 Sun.	Bhâdrapada1055	9 35	7 44	8 45	10 25	11 26	. t. 5•5
1133 Teb. 21 Tues. 1133 Aug. 17 Thur. 1135 Jan. 1 Tues.	Phâlguna 1055 Bhâdrapada 1056 Pausha 1057	3 29 15 31 22 45	2 16 14 37 21 14			16 25 24 16	2·8 9·5
1135 June 27 Thur. 1135 Dec. 22 Sun.	Âshâdha 1058 Pausha 1058	6 47 8 1	5 5 6 10	6 24 7 11	7 10 8 51	.8 29 9 52	t. t.

	Hindu Month	Ti	imc			rom Lank as 6 A	a mean si	unrise	,	Number of
A.D	and	Great phas		Begin	1	Perio	od of	Er		twelfths
Year, Month,	Current Śaka Year.	[i.e. m	10- 0f	ning Eclips	01 -	Begin-	End.	o Ecli	_	celipsed. ["t."=total
and Day.	["w.m.i." = with mean intercalations.]	full mo	oon] m.	h. n	_	ning.	h. m.	h.		eclipse.]
1	2	3		4		5	6	7		8
1136 Juue 15 Mon. 1136 Dec. 10 Thur. 1138 Apr. 26 Tues. 1138 Oct. 19 Wed. 1139 Apr. 16 Sun.	Âshâḍba 1059 Pausha 1059 Vaiśâkha. 1061 Kârttika 1061 Vaiśâkha. 1062	10 20 23	39 2 2 20 34	8 5 18 4 22	53 59 44 5 42	19 3 - - 2 42	20 15 — — 4 26	21 11 21 24 5	25 5 20 35 26	t. 3·9 6·5 5·9 t.
1139 Oct. 9 Mon. 1140 Apr. 4 Thur, 1140 Sept. 28 Sat. 1142 Feb. 12 Thur. 1142 Aug. 8 Sat.	Kârttika 1062 Chaîtra.¹ 1063 Âśvina 1063 Phâlguna 1064 Śrâvaṇa 1065	4 4 5 2	21 41 28 7 20	3 3 4 0 3	29 30 3 36 50	12 29 — — —	14 13	15 5 6 3 12	13 52 53 38 50	t, 5·0 7·9 9·3 9·0
1143 Feb. 1 Mon. 1143 July 28 Wed. 1144 Jau. 22 Sat. 1144 July 16 Sun. 1145 June 6 Wed.	Mågha. 1065 Śrâvana. 1066 Mågha. 1066 Śrâvana. 1067 Jyeshtha. 1068	11 6 8 8 15 6	23 41 51 47 48	9 5 7 3 14 5		16 32 10 52 . —	18 14 12 30 —	19 13 10 16 20	15 31 3 38 34	t. t. 5·2 2·5 2·0
1145 Dec. 1 Sat. 1146 May 27 Mon. 1146 Nov. 20 Wed. 1147 May 17 Sat. 1147 Nov. 9 Sun.	Mårgasirsha 1068 Jyeshtha 1069 Mårgasirsha 1069 Jyeshtha 1070 Kårttika 1070	13 4 4	20 0 2 21 56	11 1 2 1 2 4	6 10 10 47 31	12 13 3 11 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	13 47 4 53 —	5 14 5 5 11	34 50 54 55 21	5·6 t. t. 10·4 7·9
1149. Mar. 25 Fri. 1149 Sept. 19 Mon. 1150 Mar. 15 Wed. 1150 Sept. 8 Fri. 1151 Mar. 4 Sun.	Chaitra 1072 Âśvina 1072 Chaitra 1073 Bhâdrapada 1073 Phâlguna 1073	4 2 17	54 58 19 12 33	3 3 0 2 15 2	39 34 27 20	$\begin{bmatrix} - \\ 1 \\ 27 \\ 16 \\ 21 \\ - \end{bmatrix}$	3 11 18 3	25 6. 4 19 12	9 22 11 4 50	5·9 7·6 t. t. 6·2
1151 Aug. 28 Tues. 1153 Jan. 12 Mon. 1153 July 7 Tues. 1154 Jan. 1 Fri. 1154 Junc 27 Sun.	Bhâdrapada. 1074 Mâgha 1075 Âshâdha 1076 Pausha 1076 Âshâdha 1077	7 13	28 20 50 22 0	5 4 12 1 14 3	24 49 13 31 12			23 8 15 18 4	32 51 27 13 48	4·0 9·3 11·5 t. t.
1154 Dec. 21 Tues. 1155 June 16 Thur. 1156 May 7 Mon. 1156 Oct. 30 Tues. 1157 Apr. 26 Fri.	Pausha 1077 Âshâdha 1078 Vaiśâkha 1079 Kârttika 1079 Vaiśâkha 1080	7	7 0 16 43 27	2 6 2	4 30 7 29 35	9 36		19 20 4 8 12	10 30 25 57 19	3·9 0·8 4·7 5·6 t.
1157 Oct. 19 Sat. 1158 Apr. 15 Tues. 1158 Oct. 9 Thur. 1160 Feb. 23 Tues. 1160 Aug. 18 Thur.	Kârttika 1080 Vaiśâkha. 1081 Âśvina. 1081 Phâlguna 1082 Bhâdrapada. 1083	11 .13	48 32 51 23	10 1 12 2 8 5	56 14 22 53 49	20 56 — — — —	22 40	23 12 15 11 19	40 50 20 53 33	t. 6·5 8·7 8·9 7·2
1161 Feb. 12 Sun. 1161 Aug. 7 Mon. 1162 Feb. 1 Thur. 1162 July 27 Fri. 1163 June 18 Tucs.	Phâlgnna. 1083 Śrâvaṇa 1084 Mâgha, 1084 Śrâvaṇa. 1085 Âshâdha 1086	18 17 22	56 26 23 51 11	16 1 21 4	4 35 11 45 45	$1 & 5 \\ 17 & 36 \\ - & - \\ - & - \\ - & -$	2 47 19 16 — —	3 20 18 23 3	48 17 35 57 37	t. t. 5·3 4·3 0·6
1163 Dec. 12 Thur. 1164 June 6 Sat. 1164 Nov. 30 Mon. 1165 May 27 Thur. 1165 Nov. 19 Fri.	Pausha 1086 Jyeshtha. 1087 Mûvgaśirsha 1087 Jyeshtha. 1088 Mûrgaśirsha 1088	20 12 11	26 25 15 36 24	18 3 10 2 9 5	23	19 42 11 24 11 36	21 8 13 6 11 36	13 22 14 13 19	39 13 7 15 51	5·4 t. t. t. 8·2

	Hindu Month	Time	measured tak	from Lan en as 6 A		unrise,	Number of
A. D. Year, Month,	and	Greatest	Begin-	Peri	od of seuration.	End	twelfths
and Day.	Current Śaka Year.	[i.e. mo- ment of full moon		Begin- ning.	End.	of Eclipse.	celipsed. ["t."=total
	["w. m. i." = with mean intercalations.]	h. m.	h. m.	h. m.	h. m.	h. m.	cclipse.]
11	2	3	4	5	в	7	8
1167 Apr. 6 Thur. 1167 Sept. 30 Sat. 1168 Mar. 25 Mon. 1168 Sept. 18 Wcd. 1169 Mar. 14 Fri.	Chaitra 1090 Âśvina 1090 Chaitra 1091 Âśvina 1091 Chaitra 1092	6 57 13 8 9 45 24 55 19 33	5 50 11 48 7 53 23 3 18 12	8 53 24 3	10 37 25 47	8 4 14 28 11 37 26 47 20 54	$egin{array}{c} 4 \cdot 5 \ 6 \cdot 9 \ t. \ t. \ 7 \cdot 1 \end{array}$
1169 Sept. 8 Mon. 1171 Jan. 23 Sat. 1171 July 18 Sun. 1172 Jan. 12 Wed. 1172 July 7 Fri.	Bhâdrapada 1092 Mâgha. 1093 Śrâvaṇa. 1094 Mâgha. 1094 Âshâḍha 1095	5 37 15 56 20 54 24 38 10 25	4 25 14 25 19 21 22 47 8 35	- - 23 48 9 38		6 49 17 27 22 27 26 29 12 15	5·3 9 2 9·9 t. t.
1173 Jan. 1 Mon. 1173 June 27 Wed. 1174 May 18 Sat. 1174 Nov. 10 Sun. 1175 May 7 Wed.	Pausha 1095 Åshådha 1096 Jyeshtha 1097 Mårgaśirsha 1097 Vaiśākha 1098	2 8 3 26 10 28 16 13 17 15	1 3 2 37 9 30 15 0 15 25	- - - 16 26		3 13 4 15 11 26 17 26 19 5	4·2 2·3 3·2 5·4 t.
1175 Oct. 31 Fri. 1176 Apr. 25 Sun. 1176 Oct. 19 Tues. 1178 Mar. 5 Sun. 1178 Aug. 29 Tues.	Kârttika 1098 Vaiśâkha. 1099 Kârttika 1099 Phâlguna. 1100 Bhâdrapada 1101	6 31 18 12 22 23 18 37 25 6	4 39 16 46 20 53 17 10 23 51	5 40 — — —	7 22 — — — —	8 23 19 38 23 53 20 4 26 21	t. 8·1 9·0 8·2 5·9
1179 Feb. 23 Fri. 1179 Aug. 18 Sat. 1180 Feb. 13 Wed. 1180 Aug. 7 Thur. 1181 Dec. 22 Tues.	Phâlguna 1101 Bhâdrapada 1102 Phâlguna 1102 Śrâvaṇa 1103 Pausha 1104	10 27 25 20 1 54 6 2 20 26	8 35 23 28 0 40 4 47 19 14	9 36 24 28 — —	11 18 26 12 — —	12 19 27 12 3 8 7 17 21 38	t. t. 5·7 5·8 5·2
1182 June 18 Fri. 1182 Dec. 11 Sat. 1183 June 7 Tues. 1183 Dec. 1 Thur. 1185 Apr. 16 Tues.	Âshâḍha 1105 Pausha 1105 Jyeshtha 1106 Mârgaśîrsha 1106 Vaiśâkha 1108	3 55 20 30 18 45 2 59 13 44	2 9 18 38 17 2 1 32 12 48	3 19 19 39 18 17 —	4 31 21 21 19 13 —	5 41 22 22 20 28 4 26 14 40	t. t. t. . 8·3 3·0
1185 Oct. 10 Thur. 1186 Apr. 5 Sat. 1186 Sept. 30 Tues. 1187 Mar. 26 Thur. 1187 Sept. 19 Sat.	Âśvina. 1108 Chaitra. 1109 Âśvina. 1109 Chaitra. 1110 Âśvina. 1110	21 27 17 6 8 40. 3 27 12 57	20 9 15 15 6 48 2 0 11 40	16 16 7 49 —	17 56 · 9 31 —	22 45 18 67 10 32 4 54 14 14	6·4 t. t. 8·2 6·3
1189 Feb. 2 Thur. 1189 July 29 Sat. 1190 Jan. 23 Tues. 1190 July 18 Wed. 1191 Jan. 12 Sat.	Mågha. 1111 Śrâvaṇa 1112 Mågha ' 1112 Śrâvaṇa 1113 Mågha. 1113	24 25 4 9 8 50 17 55 10 8	22 56 2 42 6 59 16 4 9 2	- 8 0 17 5 -	9 40 18 45	25 54 5 36 10 41 19 46 11 14	8·7 8·2 t. t. 4·3
1191 July 8 Mon. 1192 May 28 Thur. 1192 Nov. 20 Fri. 1193 May 17 Mon. 1193 Nov. 10 Wed.	Ashâḍha 1114 Jyeshtha 1115 Mârgaśîrsha 1115 Jyeshtha 1116 Kârttika 1116	11 2 17 31 24 55 23 56 15 17	10 0 16 52 23 42 22 7 13 25	23 11 14 26		12 4 18 10 26 8 25 45 17 9	3·8 1·4 5·4 t. t.
1194 May 6 Fri. 1194 Oct. 31 Mon. 1196 Mar. 16 Sat. 1196 Sept. 9 Mon. 1197 Mar. 5 Wed.	Vaiśâkha 1117 Kârttika 1117 Chaitra 1119 Bhâdrapada 1119 Phâlguna 1119	24 50 6 58 2 45 8 12 18 48	23 17 5 27 1 22 7 5 16 56	- - - 17 56	19 40	26 23 8 29 4 8 9 19 20 40	9·9 9·3 7·4 4·4

	Hindu Month	Time	measured tal	from Lai ch as 6 A	ka mean s	unrise,	Number of
A. D. Year, Month,	and	Greatest phase.	Degin-		od of scuration.	End	twelfths celipsed.
and Day.	Current Śaka Year.	[i.c. mo- ment of full moon	Eclipse.	Begin- ning.	End.	of Eclipse.	["t."= total
	["w.m.i." = with mean intercalations.]	h. m.	lı. 111.	h. m.	h. m.	h. m.	eclipsc.]
11	2	3	4	5	8	7	8
1197 Aug. 29 Fri. 1198 Feb. 23 Mon. 1198 Aug. 18 Tues. 1200 Jan. 3 Mon. 1200 June 28 Wed.	Bbådrapada 1120 Phålguna 1120 Phådrapada 1121 Pausha 1122 Åshådha 1123	8 17 10 13 13 19 4 28 11 20	6 25 8 56 11 57 3 17 9 37	7 26 — — — — — — — — — — — — — — — — — —	9 8	10 9 11 30 14 41 5 39 13 3	t. 6·3 7·2 5·1 t.
1200 Dec. 22 Fri. 1201 June 18 Mon. 1201 Dec. 11 Tues. 1203 Apr. 27 Sun. 1203 Oct. 22 Wed.	Pausha 1123 Âshûḍha 1124 Pausha 1124 Vaiśākha 1126 Kârttika 1126	4 44 1 54 11 34 20 27 5 52	2 52 0 8 10 6 19 44 4 38	3 53 1 18 — — —	5 35 2 30 — —	6 36 3 40 13 2 21 10 7 6	t. t. 8·5 1·7 5·7
1204 Apr. 15 Thur. 1204 Oct. 10 Snn. 1205 Apr. 5 Tucs. 1205 Sept. 29 Thur. 1207 Feb. 14 Wed.	Vaiśākha, 1127 Âśvina. 1127 Chaitra. 1128 Âśvina. 1128 Phâlguna. 1129	24 18 16 41 11 13 20 18 8 47	22 28 14 49 9 42 18 57 7 20	23 29 15 50 — —	25 7 17 32 — —	26 8 18 33 12 44 21 39 10 14	t. t. 9·4 7·0 8·2
1207 Aug. 9 Thur. 1208 Feb. 3 Sun. 1208 July 28 Mon. 1209 Jan. 22 Thur. 1209 July 18 Sat.	Śrâvaņa 1130 Mâgha 1130 Śrâvaṇa 1131 Mâgha 1131 Śrâvaṇa 1132	11 29 16 55 25 29 18 1 18 34	10 9 15 4 23 37 16 54 17 21	16 5 24 38 —	17 45 26 20 —	12 49 18 46 27 21 19 8 19 47	6·9 t. t. 4·5 5·4
1210 Dcc. 2 Thur. 1211 May 29 Sun. 1211 Nov. 21 Mon. 1212 May 17 Thur. 1212 Nov. 10 Sat.	Mårgasîrsha 1133 Jyeshtha 1134 Mårgasirsha 1134 Jyeshtha 1135 Kårttika 1135	9 33 6 32 24 5 7 21 15 37	8 21 4 45 22 13 5 43 14 6	5 52 23 14 —	7 12 24 56 —	10 45 8 19 25 57 8 59 17 8	5·3 t. t. 11·8 9·5
1214 Mar. 27 Thur. 1214 Sept. 20 Sat. 1215 Mar. 17 Tucs. 1215 Sept. 9 Wed. 1216 Mar. 5 Sat.	Chaitra 1137 Âśvina 1137 Chaitra 1138 Bhâdrapada 1138 Phâlguna 1138	10 40 15 23 2 57 15 27 18 24	9 21 14 25 1 5 13 36 17 4	2 5 14 37	- 3 49 16 17	11 59 16 21 4 49 17 18 19 44	6.6 3.3 t. t. 6.9
1216 Aug. 28 Sun. 1218 Jan. 13 Sat. 1218 July 9 Mon. 1219 Jan. 2 Wed. 1219 June 29 Sat.	Bhídrapada 1139 Máglia 1140 Âshádha 1141 Pausha 1141 Âshádha 1142	20 44 12 27 18 46 13 0 9 2	19 16 11 17 17 8 11 9 7 13	12 10 8 18	13 50 9 46	22 12 13 37 20 24 14 51 10 51	8·5 4·8 11·7 t. t.
1219 Dec. 22 Sun. 1221 Nov. 1 Mon. 1222 Apr. 27 Wed. 1222 Oct. 21 Fri. 1223 Apr. 16 Sun.	Pausha 1142 Kârttika 1144 Vaiśâkha 1145 Kârttika 1145 Vaiśâkha 1146	20 16 14 24 7 28 24 44 18 52	18 47 13 11 5 38 22 53 17 17	6 42 23 54	8 14 25 34 —	21 45 15 37 9 18 26 35 20 27	8·7 5·5 t. t. 10·7
1223 Oct. 11 Wcd. 1225 Fch. 24 Mon. 1225 Aug. 19 Tucs. 1226 Feb. 13 Fri. 1226 Aug. 9 Sun.	Aśvina 1146 Phálguna. 1147 Bhádrapada 1148 Phálguna. 1148 Śrávana 1149	3 53 16 59 18 59 24 53 9 9	2 29 15 35 17 45 23 1 7 17	24 2 8 17	25 44 10 1	5 17 18 23 20 13 26 45 11 1	7·7 7·7 5·6 t. t.
1227 Fch. 3 Wcd. 1227 July 30 Fri. 1228 Dcc. 12 Tues. 1229 Junc 8 Fri. 1229 Dec. 2 Sun.	Mûgha. 1149 Srâvoṇa 1150 Pausha 1151 Jyeshtha II 1152 Mûrgasîrsha 1152	1 52 2 4 18 17 13 4 8 56	0 40 0 45 17 4 11 20 7 4	12 35 8 5	13 33 9 47	3 4 3 23 19 30 14 48 10 48	5·2 6·7 5·4 t.

Time measured from Lauka mean snarise,										
А. D.	Hindu Month	'1	lime	meas	ured tak	from Laúl en as 6 A	ka mean s .M.	uaris	С,	Number of
Year, Mouth,	and	Grea րիո		Beg		Perio	od of seuration.	(nd	twelfths
and Day.	Current Śaka Year.	[i.c. mer	mo- ot of	ning Eeli	-	Begin-	End.		of ipsc.	eclipsed.
, , , , , , , , , , , , , , , , , , ,	["w.m.i." = with mean intercalations.]	1	100n] 10.	 	m.	h. m.	h. 1a.		ın.	["t."=total eclipse.]
1	2	:		l	1	5	8		7	8
1230 May 28 Tues. 1230 Nov. 21 Thur. 1232 Apr. 6 Tues. 1232 Sept. 30 Thur. 1233 Mar. 27 Sun.	Jyeshtha. 1153 Mârgaśirsha 1153 Chaitra. 1155 Áśviua. 1155 Chaitra. 1156	13 23 18 22 11	46 19 31 43 3	12 22 17 21 9	3 48 18 51 11	13 19 — — 10 12	14 13 — — 11 54	15 25 19 23 12	29 50 41 35 55	t. 9·5 5·5 2·6 t.
1233 Sept. 19 Mon. 1234 May. 17 Fri. 1234 Sept. 9 Sat. 1236 Jan. 24 Thur. 1236 July 20 Sun.	ÂSviva. 1156 Chaitra. 1157 Bhhdraµada. 1157 Mâgha. 1158 Śrâvaṇa. 1159	22 2 4 20 2	43 22 23 17 19	20 0 2 19 0	53 58 51 10 46	21 55 — — —	23 81	24 3 5 21 3	33 46 55 24 52	t. 7·7 9·7 4·4 10·0
1237 Jan. 12 Mon. 1237 July 9 Thur. 1238 Jan. 2 Sat. 1238 June 28 Mon. 1239 Nov. 12 Sat.	Magha 1159 Ashadha 1160 Pausha 1160 Ashadha 1161 Margasirsha 1162	21 16 4 23 22	14 9 55 12 58	19 14 3 22 21	23 19 26 51 46	20 24 15 21 —	22 4 16 57 — —	23 17 6 23 24	59 24 33 10	t. t. 8·7 0·4 5·2
1240 May 7 Mon. 1240 Nov. 1 Thur. 1241 Apr. 27 Sat. 1241 Oct. 21 Mon. 1243 Mar. 7 Sat.	Valšákha II 1163 Kárttika 1163 Valšákha 1161 Kárttika 1161 Phálguna 1165	14 8 2 11 25	33 52 27 35 3	12 7 0 10 23	46 1 47 8 43	13 52 8 2 2 17 —	15 14 9 42 2 37 —	16 10 4 13 26	20 43 70 23	t. t. 5·3 6·9
1243 Aug. 31 Mon. 1244 Feb. 25 Thur. 1244 Aug. 19 Tri. 1245 Feb. 13 Mon. 1245 Aug. 9 Wed.	Bhâdrapada 1166 Phâlguua. 1166 Bhâdrapada 1167 Phâlguna. 1167 Srâvaya 1168	2 8 16 9	32 39 53 30 46	1 6 15 8 8	21 47 1 16 20	7 47 16 2	9 31 17 44 —	3 10 18 10 11	40 31 45 44 12	4.6 t. t. 5.7 8.1
1246 Dec. 24 Mon. 1247 June 19 Wed. 1247 Dec. 13 Fri. 1248 June 7 Snn. 1248 Dec. 2 Wed.	Pausha 1169 Åshådha 1170 Pansha 1170 Jyeshtha II. 1171 Mårgaširsha 1171	3 19 17 20 9	31 49 13 9	1 17 15 18	51 53 57 26 38	16 58 19 34	18 40 20 52	4 21 19 22 10	17 9 41 0 40	5.5 11.8 t. t. 9.5
1250 Apr. 18 Mon. 1250 Oct. 12 Wed. 1251 Apr. 7 Fri. 1251 Oct. 1 Sun. 1252 Mar. 27 Wed.	Vaiśākha 1173 Âśvina II 1173 Chaitra 1174 Âśvina 1174 Chaitra 1175	2 6 18 6 10	16 17 59 18 17	1 5 17 4 8	10 33 8 28 48	18 9 5 32 —	19 49 7 4	3 7 20 8 11	22 1 50 8 46	4·3 1·8 t. t. 8·8
1252 Sept. 19 Thur. 1254 Feb. 4 Wed. 1254 July 31 Fri. 1255 Jan. 24 Sun. 1255 July 20 Tues.	Âśvina. 1175 Mâgha. 1176 Śrâvaṇa. 1177 Mâgha. 1177 Śrâvaṇa. 1178	12 4 9 5 23	8 6 50 22 13	10 3 8 3 21	33 1 22 31 22	- - - 32 22 23	6 12 24 3	13 5 11 7 25	43 11 18 13 4	10·7 4·2 8·6 t.
1256 Jan. 13 Thur. 1256 July 9 Sun. 1257 Nov. 23 Fri. 1258 May 18 Sat. 1258 Nov. 12 Tues.	Magha 1178 Ashadha 1179 Margasirsha 1180 Jyeshtha 1181 Karttika II 1181	13 5 7 21 17	33 50 36 34 2	12 5 6 19 15	3 2 26 49 11	21 0 16 12	22 8 17 52	15 6 8 23 18	3 38 46 19 53	8·9 2·2 4·9 t. t.
1259 May 8 Thur. 1259 Nov. 1 Sat. 1261 Mar. 18 Fri. 1261 Sept. 10 Sat. 1262 Mar. 7 Tues.	Vaiśākha. 1182 Kārttika. 1182 Chaitra. 1184 Bhâdrapada II. 1184 Phâlguna. 1184	9 19 8 10 16	59 21 57 20 15	8 17 7 9 14	16 53 41 19 23	9 31 — — — 15 23	10 27 — — 17 7	11 20 10 11 18	42 49 13 21 7	t 8·6 6·0 3·6 t.

A. D.	Hindu Month	Time	nicasured ta	l from Lan ken as 6 A	ka mean s .M.	unrisc,	Number of
Year, Month,	and	Greatest phase.	Degin-	10401 070	od of scuration.	End	twelfths eclipsed.
and Day.	Current Śaka Year.	[i.e. mo- ment of full moon		Di	End.	of Eclipse.	["t."=total
	["w.m.i." = with mean intercalations.]	h. m.	h. m.	- 	h. m.	h. m.	eclipse.]
1	2	3	4	5	6	7	8
1262 Aug. 30 Wed. 1263 Feb. 24 Sat. 1263 Aug. 20 Mon. 1265 Jan. 3 Sat.	Bhâdrapada. 1185 Phâlguna 1185 Bhâdrapada. 1186 Pausha 1187	24 45 17 0 17 34 11 46	22 54 15 42 16 3 10 34	23 55	25 35	26 36 18 18 19 5 12 58	t. 6·5 9·3 5·3
1265 June 30 Tues.	Âshûḍha 1188	1 59	0 26	-		3 32	9 - 9
1265 Dec. 24 Thur. 1266 June 19 Sat. 1266 Dec. 13 Mon. 1267 June 8 Wed. 1268 Apr. 28 Sat.	Pausha 1188 Âshûdha 1189 Pausha 1189 Jyeshtha II 1190 Vaisûkha 1191	2 44 2 37 17 55 6 36 9 53	0 53 0 48 16 23 5 58 8 57	1 54 1 52 —	3 34 3 22 — — —	4 35 4 26 19 27 7 14 10 49	t. t. 9·6 1·3 3·0
1268 Oct. 22 Mon. 1269 Apr. 18 Thur. 1269 Oct. 11 Fri. 1270 Apr. 7 Mon. 1270 Sept. 30 Tues.	Kârttika 1191 Vaiśâkha 1192 Âśvina II. 1192 Chaitra 1193 Âśvina 1193	13 54 2 48 14 0 18 0 20 4	13 16 0 58 12 11 16 27 18 27	1 59 13 16 —	3 37 14 44 —	14 32 4 38 15 49 19 33 21 41	1·3 t. t. 9·9 11·3
1272 Feb. 15 Mon. 1272 Aug. 10 Wed. 1273 Feb. 3 Fri. 1273 July 31 Mon. 1274 Jan. 23 Tues.	Phâlguna 1194 Śrûvaṇa 1195 Mâgha 1195 Śrâvaṇa 1196 Mâgha 1196	11 44 17 26 13 27 6 23 22 3	10 42 16 5 11 36 4 31 20 32	12 37 5 31	14 17 7 15	12 46 18 47 15 18 8 15 23 34	3·7 7·1 t. t. 9·2
1274 July 20 Fri. 1275 Dec. 4 Wed. 1276 May 29 Fri. 1276 Nov. 22 Sun. 1277 May 18 Tues.	Śrâvaṇa 1197 Môrgaśirsha 1198 Jyeshṭḥa 1199 Môrgaśirsha 1199 Jyeshṭḥa 1200	12 25 16 21 4 31 25 24 17 22	11 23 15 12 2 49 23 34 15 36	4 10 24 35 16 45	- 4 52 26 13 17 59	13 27 17 30 6 13 27 14 19 8	3·8 4·7 t. t. t.
1277 Nov. 12 Fri. 1279 Mar. 29 Wed. 1279 Sept. 21 Thur. 1280 Mar. 17 Sun. 1280 Sept. 10 Tues.	Kûrttika 1I. 1200 Chaitra. 1202 Âśvina 1202 Chaitra. 1203 Bhûdrapada. 1203	3 14 16 38 18 16 23 45 8 50	1 44 15 28 17 22 21 53 7 0	22 54 8 1	24 36 9 39	4 44 17 48 19 10 25. 37 10 40	9·0 4·9 2·8 t. t.
1281 Mar. 6 Thur. 1281 Aug. 30 Sat. 1283 Jan. 14 Thur. 1283 July 11 Suu. 1284 Jan. 4 Tues.	Phâlguna 1203 Bhâdrapada 1204 Mâgha 1205 Âshâdha II 1206 Pausha 1206	24 22 25 25 20 31 8 31 11 36	$\begin{bmatrix} 23 & 0 \\ 23 & 51 \\ 19 & 19 \\ 7 & 5 \\ 9 & 45 \end{bmatrix}$	10 46		25 44 26 59 21 43 9 57 13 27	7.3 10·5 5·2 8·1 t.
1284 June 29 Thur. 1284 Dec. 24 Sun. 1285 June 18 Mon. 1286 May 9 Thur. 1286 Nov. 2 Sat.	Âshûdha 1207 Pausha 1207 Âshûdha 1208 Vaisûkha II 1209 Kûrttika 1209	9 5 2 44 13 25 17 27 21 41	7 15 1 12 12 29 16 45 21 11	8 16 — — — —	9 54 — — —	10 55 4 16 14 21 18 9 22 11	t. 9·7 3·0 1·6 0·8
1287 Apr. 29 Tues. 1287 Oct. 22 Wed. 1288 Apr. 18 Sun. 1288 Oct. 11 Mou. 1290 Feb. 25 Sat.	Vaiśákha 1210 Kűrttika 1210 Vaiśákha 1211 Áśviua 1211 Phálguua 1212	10 31 21 45 1 36 4 8 19 17	8 41 19 57 0 0 2 28 18 22	9 45 21 3 — 3 58	11 17 22 27 - 4 18	12 21 23 33 3 12 5 48 20 12	t. t. 11·0 t. 2·9
1290 Aug. 21 Mon. 1291 Feb. 14 Wed. 1291 Aug. 11 Sat. 1292 Feb. 4 Mon. 1292 July 30 Wed.	Bhûdrapada 1213 Phâlguna 1213 Śrâvaṇa 1214 Mâgha 1214 Śrâvaṇa 1215	25 11 21 24 13 40 6 31 19 10	23 57 19 34 11 48 5 0 17 57	20 35 12 48 —	22 13 14 32 —	26 25 23 14 15 32 8 2 20 23	5·6 t. t. 9·5 5·5

А. D.	Hindu Mouth	Time	measured tak	from Laúl en as 6 A		unrise,	Number of
Year, Month,	and	Greatest phase.	Begin-		od of	Ead	twelfths celipsed.
and Day.	Current Śaka Year. ["w.m.i." = with mean intercalations.]	[i, c, mo- ment of fall moon]	ning of Eclipse.	Begin- ning.	End.	of Eclipse.	["t."=total
1	2	lı. m.	h. m.	h. m.	h. m.	h. m.	celipse.]
1293 Dec. 14 Mon.	Pausha	3 25 5	23 57	5	<u> </u>	26 13	<u>8</u>
1294 June 9 Wed. 1294 Dec. 4 Sat. 1295 May 29 Sun. 1295 Nov. 23 Wed.	Jyeshtha II 1217 Mûrgasîrsha 1217 Jyeshtha 1218 Mûrgasîrsha 1218	11 32 9 43 24 49 11 15	9 56 7 53 23 0 9 44	8 54 24 6	10 32 25 32	13 8 11 33 26 38 12 46	11·1 t. t. 9·2
1296 May 18 Fri. 1297 Apr. 8 Mon. 1297 Oct. 2 Wed. 1298 Mar. 29 Sat. 1298 Sept. 21 Sun.	Jyeshtha 1219 Chaitra 1220 Âśvina 1220 Chaitra 1221 Âśvina 1221	17 47 24 15 2 20 7 0 17 0	17 11 23 13 1 34 5 9 15 10	G 10 16 12	- - 7 50 17 48	18 23 25 17 3 6 8 51 18 50	1·2 3·7 2·0 t. t.
1299 Mar. 18 Wed. 1299 Sept. 11 Fri. 1301 Jan. 25 Wed. 1301 July 21 Fri. 1302 Jan. 14 San.	Chaitra 1222 Bhâdrapada 1222 Mâgha 1223 Śrâvaṇa 1224 Mâgha 1224	7 40 9 25 5 5 15 5 20 27	6 12 7 45 3 53 13 48 18 36			9 8 11 2 6 17 16 22 22 18	8·5 11·5 5·2 6·3 t.
1302 July 10 Tucs. 1303 Jan. 4 Fri. 1303 June 29 Sat. 1304 May 20 Wed. 1304 Nov. 13 Fri.	Âshậ/ha II. 1225 Pausha 1225 Âshâ/dha 1226 Jyeshtha 1227 Mârgasîrsha 1227	15 37 11 29 20 19 0 59 5 35	13 45 9 57 19 9 0 44 5 14	14 46 — — —	16 28	17 29 13 1 21 29 1 14 5 56	t, 9·7 4·9 0·2 0·4
1305 May 9 Sun. 1305 Nov. 2 Tues. 1306 Apr. 29 Fri. 1306 Oct. 22 Sat. 1308 Mar. 8 Fri.	Vaisakha II. 1228 Karttika. 1228 Vaisakha. 1220 Karttika. 1220 Phâlguna. 1230	18 9 5 47 9 1 12 25 2 38	16 22 4 0 7 21 10 45 1 50	17 27 5 6 8 45 12 9	18 51 6 28 9 17 12 41	19 56 7 34 10 41 14 5 3 26	f. t. t. 2∙2
1308 Sept. 1 Sun. 1309 Feb. 25 Tues. 1309 Aug. 21 Thur. 1310 Feb. 14 Sat. 1310 Aug. 11 Tues.	Bhâdrapada 1231 Phâlguna 1231 Bhâdrapada 1232 Phâlguna 1232 Śrâvaṇa 1233	8 56 5 14 20 56 14 53 1 57	7 49 3 24 19 5 13 20 0 35	 4 25 20 6 	6 3 21 46 —	10 3 7 4 22 47 16 26 3 19	4·5 t. t. 10·1 7·3
1311 Dec. 26 Sun. 1312 June 19 Mon. 1312 Dec. 14 Thur. 1313 June 9 Sat. 1313 Dec. 3 Mon.	Pansha, 1234 Âshâdha 1235 Pausha 1235 Jyeshtha 11 Mârgaśirsha 1236	9 47 18 36 18 1 8 13 19 15	8 40 17 5 16 11 6 23 17 41	$\begin{array}{c} - \\ - \\ 17 & 12 \\ 7 & 25 \\ - \end{array}$	18 50 9 1	10 54 20. 7 10 51 10 3 20 46	4·4 9·4 t. t. 9·4
1314 May 30 Thur. 1315 Apr. 20 Sun. 1315 Oct. 13 Mon. 1316 Apr. 8 Thur. 1316 Oct. 1 Fri.	Jyeshtha. 1237 Vaiśākha 1238 Kârttika I 1238 Chaitra. 1239 Âśvina 1239	1 16 7 40 10 35 14 3 25 20	0 25 6 51 9 55 12 13 23 30	13 16 24 34	- 14 50 26 6	2 7 8 29 11 15 15 53 27 10	2·5 2·3 1·5 t.
1317 Mar. 28 Mon. 1317 Sept. 21 Wed. 1319 Feb 5 Mon. 1319 Aug. 1 Wed. 1320 Jan. 26 Sat.	Chaitra. 1240 Âśvina. 1240 Mâgha. 1241 Śrâvaṇa. 1242 Mâgha. 1242	14 42 17 30 13 40 21 40 5 11	13 10 15 50 12 30 20 33 3 20	17 18 - 4 21	17 42 — 6 1	16 14 19 10 14 50 22 47 7 2	9·8 t. 4·8 4·4 t.
1320 July 20 Sun. 1321 Jun. 14 Wed. 1321 July 10 Fri. 1323 May 20 Fri. 1323 Nov. 13 Sun.	Śrâvaṇa 1243 Mâgha. 1243 Âshâḍha II 1244 Jyeshṭha. 1246 Mûrgaśirsha. 1246	22 11 20 10 3 16 25 39 13 51	20 19 18 37 1 57 23 54 12 4	21 20 — — 25 5 13 11	23 2 — 26 13 14 31	24 3 21 43 4 35 27 24 15 38	t. 9·9 6·6· t. t.

A.D.	Hindu Month	Time		from Landen as 6 A		unrise,	Number of
A. D. Year, Month,	and	Greatest phase.	Begin- ning of		od of seuration.	End of	twelfths eclipsed.
and Day.	Current Śaka Year. ["w.m.i." = with mean intercalations.]	[i.e. mo- ment of fullmoon]	Eclipse.	Begin- ning.	End.	Eelipse.	["t."=total
1	2	h. m.	h. m.	h. m.	h. m.	h. m.	eelipse.]
1324 May 9 Wed. 1324 Nov. 1 Thur. 1326 Mar. 19 Wed. 1326 Sept. 12 Fri. 1327 Mar. 8 Sun.	Vaiśâkha II. 1247 Kârttika. 1247 Chaitra. 1249 Bhâdrapada II. 1249 Phâlguna. 1249	16 23 20 50 9 55 16 53 13 1	14 39 19 9 9 19 15 54 11 11	15 53 20 30 — 12 14	16 53 21 10 13 48	18 7 22 31 10 31 17 52 14 51	t. t. 1·2 3·4 t.
1327 Sept. 2 Wed. 1328 Feb. 25 Thur. 1328 Aug. 21 Sun. 1330 Jan. 5 Fri. 1330 July 1 Sun.	Bhâdrapada, 1250 Phâlguna 1250 Bhâdrapada 1251 Pausha 1252 Âshâdha 1253	4 23 23 8 8 51 18 27 1 37	2 33 21 32 7 23 17 21 0 12	3 34	5 12 — — —	.6 13 24 44 10 19 19 33 3 2	t. 10·9 8·4 4·3 7·8
1330 Dec. 26 Wed. 1331 June 20 Thnr. 1331 Dec. 15 Sun. 1332 June 9 Tues. 1333 Apr. 30 Fri.	Pausha 1253 Âshâdha 1254 Pausha 1254 Jyeshtha II 1255 Vaiśâkha 1256	2 22 15 34 3 19 8 48 14 57	0 32 13 43 1 47 7 43 14 29	1 33 14 44 — — —	3 11 -16 24 — —	4 12 17 25 4 51 9 53 15 25	t. t. 9·7 4·1 0·7
1333 Oct. 23 Sat. 1334 Apr. 19 Tues. 1334 Oct. 13 Thur. 1335 Apr. 8 Sat. 1335 Oct. 3 Tues.	Kârttika 1256 Vaiśâkha 1257 Âśvina II 1257 Chaitra 1258 Âśvina 1258	18 58 21 2 9 45 21 40 1 43	18 22 19 14 · 7 56 20 3 0 1	20 19 9 · 0 — 1 22	21 45 10 30 - 2 4	19 34 22 50 11 34 23 17 3 25	1·2 t. t. 11·2 t.
1337 Feb. 15 Sat. 1337 Aug. 12 Tucs. 1338 Feb. 5 Thur. 1338 Aug. 1 Sat. 1339 Jan. 26 Tues.	Phâlguna 1259 Śrâvana II 1260 Mâgha. 1260 Śrâvana. 1261 Mâgha. 1261	22 8 4 23 13 53 4 51 4 51	21 1 3 29 12 2 3 1 3 17	13 3 4 2	14 43 5 40	23 15 5 17 15 44 6 41 6 25	4.5 2.8 t. t. 10.2
1339 July 21 Wed. 1341 May 31 Thur. 1341 Nov. 23 Fri. 1342 May 20 Mon. 1342 Nov. 13 Wed.	Srâvana 1262 Jyeshtha 1264 Mârgaśîrsha 1264 Jyeshtha 1265 Mârgaśîrsha 1265	10 20 9 10 22 1 23 38 5 20	8 52 7 28 20 15 21 52 3 37	8 47 21 23 23 0 4 55	9 33 22 39 24 16 5 45	11 48 10 52 23 47 25 24 7 3	8·4 t. t. t.
1344 Sept. 23 Thur. 1345 Mar. 18 Fri. 1345 Sept. 12 Mon. 1346 Mar. 8 Wed. 1346 Sept. 1 Fri.	Aśvina 1267 Chaitra 1268 Âśvina 1268 Phâlguna 1268 Bhâdrapada 1269	0 57 20 38 11 56 7 19 15 48	0 7 18 49 10 6 5 42 14 16	19 54 11 9 —	21 22 12 43 —	1 47 22 27 13 46 8 56 17 20	2·4 t. t. 11·5 9·7
1348 Jan. 17 Thur. 1348 July 11 Fri. 1349 Jan. 5 Mon. 1349 June 30 Tues. 1349 Dec. 25 Fri.	Mâgha 1270 Âshâḍha 11 1271 Pausha 1271 Âshâḍha 1272 Pausha 1272	3 5 8 47 10 39 23 1 11 18	2 0 7 30 8 49 21 9 9 46	9 51 22 9	-11 27 23 53 -	4 10 10 4 12 29 24 53 12 50	4·2 6·2 t. t. 9·8
1350 June 20 Sun. 1351 Nov. 4 Fri. 1352 Apr. 30 Mon. 1352 Oct. 23 Tues. 1353 Apr. 19 Fri.	Ashâdha 1273 Mârgaśirsha 1274 Vaiśākha 1275 Kârttika 1275 Vaiśākha 1276	16 15 3 29 3 50 18 19 4 26	15 0 2 56 2 5 16 30 2 45	$\begin{bmatrix} - \\ 3 & 15 \\ 17 & 36 \\ 4 & 6 \end{bmatrix}$	4 25 19 2 4 46	17 30 4 2 5 35 20 8 6 7	5·8 1·0 t. t. t.
1353 Oct. 13 Sun. 1355 Feb. 27 Fri. 1355 Aug. 23 Sun. 1356 Feb. 16 Tues. 1356 Aug. 11 Thur.	Âśvina 1276 Phâlguna 1277 Bhâdrapada 1278 Phâlguna 1278 Śrâvana II 1279	10 8 6 30 11 13 22 24 11 43	8 25 5 26 10 35 20 34 9 53	9 41 — 21 35 10 57	10 35 ————————————————————————————————————	11 51 7 34 11 51 24 14 13 33	t. 4·0 1·3 t. t.

A, D,	. Hindu Month	Time	measured tak	from Landen as 6 A		nnrise,	Number of
Year, Month,	and `	Greatest phase.	Degin-	1	od of euration.	End of	twelfths eclipsed.
and Day.	Current Śaka Year. [" w . m . i ." = with mean intercalations.]	[i.e. mo- ment of full moon	Eclipse.	Begin- ning.	End.	Eclipse.	["t." = total
1	2	h. m.	h. m.	h. m.	h. m.	h. m.	eclipse.]
1357 Feb. 5 Sun.	Mågha	13 21	11 47	5	6	7 14 55	8
1357 July 31 Mon. 1359 June 11 Tues. 1359 Dec. 5 Thur. 1360 May 31 Sun.	Śrāvaņa. 1280 Jyeshtha II 1282 Mārgašīrsha. 1282 Jyeshtha. 1283	17 31 16 33 6 18 6 43	15 58 14 56 4 32 4 54	5 40 5 58	- 6 56 7 28	19 4 18 10 8 4 8 32	10·1 11·2 t. t.
1360 Nov. 23 Mon. 1362 Oct. 4 Tucs. 1363 Mar. 30 Thur. 1363 Sept. 23 Sat. 1364 Mar. 18 Mon.	Mârgaśîrsha 1283 Âśvina 1285 Chaitra 1286 Âśvina 1286 Chaitra 1287	13 54 9 7 4 7 19 34 15 23	12 11 8 23 2 20 17 45 13 43	13 27 3 25 18 51 15 7	14 21 4 49 20 17 15 39	15 37 9 51 5 54 21 23 17 3	t. 1·8 t. t. t.
1364 Sept. 11 Wed. 1366 Jan. 27 Tues. 1366 July 22 Wed. 1367 Jan. 16 Sat. 1367 July 12 Mon.	Bhâdrapada II 1287 Mâgha. 1288 Śrâvaṇa. 1289 Mâgha. 1289 Âshâḍha I. 1290	22 56 11 33 16 0 18 49 6 30	21 20 10 31 14 52 16 59 4 38	- - 18 1 5 38	19 37 7 22	24 32 12 35 17 8 20 39 8 22	11·0 3·8 4·6 t.
1368 Jan. 5 Wed. 1368 June 30 Fri. 1369 Nov. 14 Wed. 1370 May 11 Sat. 1370 Nov. 4 Mon.	Pausha 1290 Âshâḍha 1291 Mârgaśîrsha 1292 Vaiśākha II 1293 Kârttika -1293	19 22 23 42 12 3 10 34 3 0	17 49 22 20 11 35 8 52 1 12	- - 10 12 2 18	 10 56 3 42	20 55 25 4 12 31 12 16 4 48	10·0 7·3 0·7 t. t.
1371 Apr. 30 Wcd. 1371 Oct. 24 Fri. 1373 Mar. 9 Wed. 1374 Feb. 27 Mon. 1374 Aug. 22 Tues.	Vaiśākha. 1294 Kârttika. 1294 Phâlguna 1295 Phâlguna 1296 Bhâdrapada. 1297	11 8 18 35 14 38 6 51 18 38	9 23 16 52 13 38 5 1 16 51	10 35 18 7 — 6 2 17 56	11 41 19 3 - 7 40 19 20	12 53 20 18 15 38 8 41 20 25	t. t. 3.5 t. t.
1375 Feb. 16 Fri. 1375 Aug. 11 Sat. 1377 June 21 Snn. 1377 Dec. 15 Tucs. 1378 June 11 Fri.	Phâlguna 1297 Śrâvaṇa II 1298 Âshâḍha 1300 Pausha 1300 Jycshṭha II 1301	21 43 24 45 23 58 14 34 13 51	20 8 23 8 22 26 12 48 12 1	13 57 13 2	- - - - - - 15 11 14 40	23 18 26 22 25 30 16 20 15 41	10·8 11·5 9·6 t. t.
1378 Dec. 4 Sat. 1379 May 31 Tues. 1380 Oct. 14 Sun. 1381 Apr. 9 Tues. 1381 Oct. 4 Fri.	Mårgaśirsha 1301 Jyeshtha 1302 Kårttika I 1303 Vaiśakha I 1304 Âśvina 1304	22 32 20 51 17 22 11 31 3 18	20 49 20 20 16 47 9 46 1 31	22 5 — — 10 56 2 37	22 59 ————————————————————————————————————	24 15 21 22 17 57 13 16 5 5	t. 0·9 1·1 t. t.
1382 Mar. 29 Sat. 1382 Sept. 23 Tues. 1384 Feb. 7 Sun. 1384 Aug. 1 Mon. 1385 Jan. 27 Fri.	Chaitra 1305 Âśvina 1305 Mâgha 1306 Śrâvaṇa 1307 Mâgha 1307	23 15 6 11 19 59 23 18 2 56	21 32 4 33 19 0 22 19 1 6	22 48 — — — 2 9	23 42 — — 3 43	24 58 7 49 20 58 24 17 4 46	t. 11·8 3·4 3·4 t.
1385 July 22 Sat. 1386 Jan. 16 Tues. 1386 July 12 Thur. 1387 Nov. 25 Mon. 1388 May 21 Thur.	Śrâvana 1308 Mâgha 1308 Âshâḍha II 1309 Mârgaśirsha 1310 Jyeshṭha 1311	14 3 3 17 7 12 20 46 17 12	12 11 1 43 5 42 20 18 15 35	13 12 — — — —	14 54 — — — —	15 55 4 51 8 42 21 14 18 49	t. 10·3 8·9 0·7 11·3
1388 Nov. 14 Sat. 1389 May 10 Mon. 1389 Nov. 4 Thur. 1390 Apr. 29 Fri. 1391 Mar. 20 Mon.	Mârgaśîrsha 1311 Jyeshtha I 1312 Kârttika 1312 Vaiśâkha 1313 Chaitra 1314	11 45 17 44 3 9 21 9 22 48	9 58 15 57 1 25 20 58 21 57	11 4 17 3 2 38 —	12 26 18 25 3 40 —	13 32 19 31 4 53 21 20 23 39	t. t. t. 0·1 2·5

	Hindu Month	Time	measured tak	from Lank en as 6 A,	a mean si	ınrise,	Number of
A. D. Year, Month,	and .	Greatest phase.	Begin-	Perio total ohs	d of	End	twelfths
and Day.	Current Śaka Year.	[i.e. mo- ment of fallmoon]	ning of Eclipse.	Begiu-	End.	of Eclipse.	eelipsed. ["t."=total
	["w.m.i." = with mean intercalations.]	h. m.	h. m.	h. m.	h. m.	h. m.	eclipse.]
1	2	3	4	5	6		8
1392 Mar. 9 Sat. 1392 Sept. 1 Sun. 1393 Feb. 27 Thur. 1393 Aug. 22 Fri. 1395 July 3 Sat.	Phâlguna 1314 Bhâdrapada 1315 Phâlguna 1315 Bhâdrapada 1316 Âshâdha 1318	15 9 25 43 5 58 8 9 7 22	13 19 23 57 4 21 6 28 5 57	$egin{bmatrix} 14 & 22 \ 25 & 7 \ \ 7 & 49 \ \ \end{bmatrix}$	15 56 26 19 8 29	16 59 27 29 7 35 9 50 8 47	t. t. 11·4 t. 7·9 t. t.
1395 Dec. 26 Sun. 1396 June 21 Wed. 1396 Dec. 15 Fri. 1397 June 11 Mon. 1398 Oct. 26 Sat.	Pausha 1318 Åshådha 1319 Pausha 1319 Jyeshtha II 1320 Kårttika 1321	22 55 20 48 7 15 3 29 1 47	21 9 18 57 5 31 2 36 1 24	22 19 19 58 6 46 —	23 31 21 38 7 44 —	24 41 22 39 8 59 4 22 2 10	t. t. t, 2·7 0·5
1399 Apr. 20 Sun. 1399 Oct. 15 Wed. 1400 Apr. 9 Fri. 1400 Oct. 3 Sun. 1402 Feb. 18 Sat.	Vaiśâkha. 1322 Kârttika I. 1322 Chaitra II. 1323 Âśvina. 1323 Phâlguna. 1324	18 48 11 13 7 3 13 37 4 10	17 5 9 27 5 18 11 56 3 15	18 22 10 35 6 29 13 17	19 14 11 51 7 37 13 57	20 31 12 59 8 48 15 18 .5 5	t. t. t. 2·9
1402 Aug. 13 Sun. 1403 Feb. 7 Wed. 1403 Aug. 2 Thur. 1404 Jan. 27 Sun, 1404 July 22 Tues.	Bhâdrapada I, 1325 Mâgha. 1326 Śrâvaṇa 1326 Mâgha. 1326 Śrâvaṇa 1327	6 44 10 58 21 36 11 12 14 42	5 59 9 8 19 46 9 37 13 8	10 12 20 47	11 44 22 25 —	7 29 12 48 23 26 12 47 16 16	1·9 t. t. 10·7 10·4
1405 Dec. 6 Sun. 1406 June 1 Tues. 1406 Nov. 25 Thur. 1407 May 21 Sat. 1407 Nov. 15 Tues.	Mårgasirsha 1328 Jyeshtha 1329 Mårgasirsha 1329 Jyeshtha 1330 Mårgasirsha 1330	5 31 23 41 20 30 24 15 11 45	5 3 22 10 18 43 22 25 10 0	19 50 23 28 11 12	21 10 25 2 12 18	5 59 25 12 22 17 26 5 13 30	0·7 . 9·5 t. t. t.
1408 May 10 Thur. 1409 Mar. 31 Sun. 1410 Mar. 20 Thur. 1410 Sept. 13 Sat. 1411 Mar. 10 Tues.	Vaiśâkha II 1331 Chaitra. 1332 Chaitra. 1333 Bhâdrapada II 1333 Phâlguna 1333	4 9 6 42 23 16 8 59 14 1	3 25 6 0 21 27 7 15 12 22	22 31 8 30 14 1	24 1 9 28 14 1	$\begin{array}{c cccc} 4 & 53 \\ 7 & 24 \\ 25 & 5 \\ 10 & 43 \\ 15 & 40 \\ \end{array}$	1·8 1·6 t. t. t.
1411 Sept. 2 Wed. 1413 July 13 Thur. 1414 Jan. 6 Sat. 1414 July 3 Tues. 1414 Dec. 26 Wed.	Bhâdrapada. 1334 Âshâdha II. 1336 Pausha 1336 Âshâdha 1337 Pausha 1337	15 44 14 47 7 14 3 54 15 56	14 0 13 30 5 28 2 2 14 12	15 13 6 38 3 2 15 26	$ \begin{array}{c cccc} 16 & 15 \\ & - \\ 7 & 50 \\ 4 & 46 \\ 16 & 26 \end{array} $	17 28 16 4 9 0 5 46 17 40	t. 6·2 t. t. t.
1415 June 22 Sat. 1416 Nov. 5 Thur. 1417 May 1 Sat. 1417 Oct. 25 Mon. 1418 Apr. 20 Wed.	Âshâdha 1338 Kârttika 1339 Vaiśâkha 1340 Kârttika 1340 Vaiśâkha 1341	10 0 10 12 2 2 19 11 14 44	8 54 9 54 0 23 17 25 12 57	1 55 18 36 14 3	2 9 19 46 .15 25	11 6 10 30 3 41 20 57 16 31	4·3 0·3 t. t. t.
1418 Oct. 14 Fri. 1419 Apr. 10 Mon. 1420 Feb. 29 Thur. 1420 Aug. 23 Fri. 1421 Feb. 17 Mon.	Kârttika I. 1341 Chaitra. 1342 Phâlguna 1342 Bhâdrapada. 1343 Phâlguna 1343	21 8 7 15 12 20 14 17 18 46	19 25 6 49 11 31 13 51 16 57	20 42	21 34 — — — — — — — — — — — — — — — — — —	22 51 7 41 13 9 14 43 20 35	t. 0·6 2·3 0·6 t.
1421 Aug. 13 Wed. 1422 Feb. 6 Fri. 1422 Aug. 2 Sun. 1423 Dcc. 17 Fri. 1424 June 12 Mon.	Śrâvaṇa II 1344 Mâgha. 1344 Śrâvaṇa. 1345 Pausha. 1346 Âshâḍha I 1347	5 19 18 57 22 13 14 21 6 6	3 29 17 20 20 35 13 51 4 43	4 33	6 5 - - - -	7 9 20 34 23 51 14 51 7 29	t. 11·2 11.8 0·8 . 7·5

·	Hindn Month	Time	measured fake	from Land		unrise,	Number of
A. D. Year, Month,	and	Greatest phase.	Begin-	Peri	od of enration.	End	twelfths eclipsed.
and Day.	Current Śaka Ycar.	[i.e.mo- ment of fulimoon]	ning of Eclipse.	Begin- ning.	End.	of Eclipse.	["t."=total
	["w.m.i." = with mean intercalations.]	h. m	h. m.	b. m.	h. m.	h. m.	eclipse.]
1			3 36			7	8
1424 Dec. 6 Wcd. 1425 June 1 Fri. 1425 Nov. 25 Sun. 1426 May 21 Tues. 1427 Apr. 11 Fri.	Mârgaśirsha 1347 Jyeshtha 1348 Mârgaśirsha 1348 Jyeshtha 1349 Vaiśākha I 1350	5 23 6 46 20 26 11 8 14 36	4 55 18 41 10 8 14 13	4 42 5 56 19 53	6 4 7 36 20 59 —	7 10 8 37 22 11 12 8 14 59	t. t. t. 3·5 0·5
1428 Mar. 31 Wed. 1428 Sept. 23 Thur. 1429 Mar. 20 Sun. 1429 Sept. 12 Mon. 1430 Sept. 2 Sat.	Chaitra 1351 Âśvina 1351 Chaitra 1352 Bhâdrapada II 1352 Bhâdrapada 1353	7 19 16 26 21 59 23 29 13 14	5 32 14 45 20 17 21 43 13 3	6 38 16 7 21 38 22 53	8' 0 16 45 22 20 24 5	9 6 18 7 23 41 25 15 13 25	t. t. t. t. 0·1
1431 July 24 Tues. 1432 Jan. 17 Thur. 1432 July 13 Sun. 1433 Jan. 5 Mon. 1433 July 2 Thur.	Śrâvaņa. 1354 Mûgha. 1354 Âshadha II. 1355 Pausha 1355 Âshûdha 1356	22 16 15 28 10 55 24 39 16 31	21 6 13 42 9 3 22 55 15 14	14 52 10 4 24 9	16 4 11 46 25 9	23 26 17 14 12 47 26 23 17 48	4·8 t. t. t. 6·2
1435 May 12 Thur. 1435 Nov. 6 Snu. 1436 Apr. 30 Mon. 1436 Oct. 25 Thur. 1437 Apr. 20 Sat.	Jyeshtha I 1358 Kârttika 1358 Vaiśâkba 1359 Kôrttika 1359 Vaiśâkha 1360	9 9 3 14 22 19 4 47 15 7	7 34 1 29 20 30 3 3 14 22	2 41 21 34 4 16	$\begin{bmatrix} - \\ 3 & 47 \\ 23 & 4 \\ 5 & 18 \\ - \end{bmatrix}$	10 44 4 59 24 8 6 31 15 52	10·6 t. t. t. 1·9
1438 Mar. 11 Tncs. 1439 Mar. 1 Sun. 1439 Aug. 24 Mon. 1440 Feb. 18 Thur. 1440 Aug. 13 Sat.	Phâlguna. 1360 Phâlguna. 1361 Bhâdrapada 1362 Phâlguna 1362 Śravaṇa II 1363	20 14 2 23 13 8 2 33 5 55	19 35 0 35 11 20 0 55 4 13	1 41 12 26 - 5 33	$\begin{bmatrix} - \\ 3 & 5 \\ 13 & 50 \\ - \cdot \\ 6 & 17 \end{bmatrix}$	20 53 4 11 14 56 4 11 7 37	1·4 t. t. 11·7 t.
1441 Dec. 27 Wed. 1442 June 23 Sat. 1442 Dec. 17 Mon. 1443 June 12 Wed. 1443 Dec. 7 Sat.	Pausha 1364 Âshâḍha 1365 Pausha 1365 Âshâḍha 1 366 Mûrgaśîrsha 1366	23 7 12 35 14 21 13 15 5 13	22 41 11 21 12 34 11 23 3 25	13 41 12 23 4 40	15 1 14 7 5 46	23 33 13 49 16 8 15 7 6 58	0·6 5·7 . t., . t.
1444 May 31 Sun. 1446 Apr. 11 Mon. 1446 Oct. 4 Tues. 1447 Apr. 1 Sat. 1447 Sept. 24 Sun.	Jyeshtha. 1367 Vaiśākha I 1369 Âśvina. 1369 Chaitra. 1370 Âśvina. 1370	18 3 15 14 24 2 5 46 7 20	16 · 51 13 · 28 22 · 23 4 · 2 5 · 33	14 38 23 55. 5 16 6 39	15 50 24 9 6 16 8 1	19 15 17 0 25 41 7 30 9 7	5 · 2 t. t. t. t.
1448 Sept. 12 Thur. 1449 Aug. 4 Mon. 1450 Jan. 27 Tues. 1450 July 24 Fri. 1451 Jan. 17 Sun.	Bhûdrapada II 1371 Śrâvana 1372 Mâgha 1372 Śrâvana 1373 Mûgha 1373	21 14 5 45 23 41 17 57 9 16	20 38 4 46 21 56 16 7 7 32	23 G 17 S. 8 44	24 16 18 46 9 48	21 50 6 44 25 26 19 47 11 0	1·2 . 3.4 t. t. t.
1451 July 13 Tues. 1453 May 22 Tues. 1453 Nov. 16 Fri. 1454 May 12 Sun. 1454 Nov. 5 Tues.	Ashâḍha II 1374 Jyeshṭha 1376 Mârgaśirsha 1376 Jyeshṭha I 1377 Kârttika 1377	23 4 16 17 11 27 5 50 12 33	21 38 14 47 9 43 4 0 10 48	10 55 5 1 11 59	11 59 6 39 13 7	24 30 17 47 13 11 7 40 14 18	8·0 9·0 t. t.
1455 May 1 Thur. 1456 Mar. 22 Mon. 1457 Mar. 11 Fri. 1457 Sept. 3 Sat. 1458 Feb. 28 Tues.	Vaiśákha. 1378 Chaitra. 1379 Phâlgnna. 1379 Bhâdrapada 1380 Phâlguua. 1380	22 48 4 2 9 55 21 9 10 3	21 51 3 44 8 9 19 23 8 23	9 17 20 32 9 47	10 33 21 46 10 19	23 45 4 20 11 41 22 55 11 43	3·1 0·3 t, t. t.

	lliudu Month	Time	measured tak	from Laúl en as 5 A	in mean s	uurise,	Number of
A. D.	. anil	Greatest	Begin-	Peri	od of enration.	End	twelfths
Year, Month,	Current Śaka Year.	[i.e. mo-	ning of Eclipse.	Begin-	End.	of Eclipse.	celipsed.
and Day.	["w, m, i"] = with mean intercalations.]	h. m.	h. m.	h. m.	h. m.	li. m.	["t."=total eclipse.]
1	2	3	4	5	6	7	8
1458 Aug. 24 Thur. 1460 Jan. 8 Tues. 1460 July 3 Thur. 1460 Dec. 27 Sat. 1461 June 22 Mou.	Bhâdrapada. 1381 Pansha 1382 Âshâḍha 1383 Pausha 1383 Âshâḍha 1384	13 43 7 52 19 1 23 11 19 42	11 58 7 24 18 0 21 24 17 51	13 10 — 22 32 18 52	14 16 23 50 20 32	15 28 .8 20 20 2 24 5S 21 33	t: 0·7 3·6 t. t:
1461 Dec. 17 Thur. 1462 June 11 Fri. 1464 Apr. 21 Sat. 1464 Oct. 15 Mon. 1465 Apr. 11 Thur.	Pansha 1384 Âshâḍha I 1385 Vaiśâkha 1387 Kârttika 1387 Chaitra II 1388	13 56 21 58 22 58 7 47 13 24	12 11 23 3S 21 14 6 10 11 3S	13 22 22 29 12 48	14 30 23 27 14 0	15 #1 26 18 24 #2 9 24 15 10	t. 6·9 t. 11·5 t.
1465 Oct. 4 Fri. 1466 Sept. 24 Wed. 1467 Aug. 15 Sat. 1468 Feb. 8 Mon. 1468 Aug. 3 Wed.	Âśviua 1385 Áśvioa 1389 Bhádrapada 1 1390 Magha 1390 Śrâvaņa 1391	15 21 5 21 13 17 7 51 25 5	13 33 4 34 12 34 6 7 23 16	14 38 7 19 24 20	16 4 	17 9 6 8 14 0 9 35 26 54	t. 2·1 1·7 t. t.
1469 Jan. 27 Fri. 1469 July 24 Mon. 1470 Jun. 17 Wed. 1471 June 2 Sun. 1471 Nov. 27 Wed.	Mâgha 1391 Śrāvaņa 1392 Mâgha 1392 Jyeshtha 1394 Mârgaširsha 1394	17 52 5 39 5 50 23 24 19 36	16 7 4 7 8 39 22 1 17 52	17 18 — — — — — 19 5	18 20 	19 37 7 11 9 1 24 47 21 20	t. 9·7 0·1 7·5 t.
1472 May 22 Fri. 1472 Nov. 15 Snn. 1473 May 12 Wed. 1473 Nov. 4 Thur. 1475 Mar. 22 Wed.	Jyeshtha 1395 Mûrgasirsha 1395 Jyeshtha I 1396 Kûrttika 1396 Chaitra 1398	13 20 20 26 6 26 20 7 17 17	11 28 18 41 5 17 19 56 15 32	12 29 19 51 — — 16 41	11 11 21 1 — — 17 50	15 12 22 11 7 35 20 18 19. 2	t. t. 4.7 0 1 t.
1475 Sept. 15 Fri. 1476 Mar. 10 Sau. 1476 Sept. 3 Tues. 1478 Jan. 18 San. 1478 July 15 Wed.	Âśviua 1 1398 Phálguna 1398 Bhádrapada 1399 Magha 1400 Śrávaṇa 1 1401	5 9 17 27 21 36 16 32 1 28	3 21 15 44 19 50 16 9 0 43	4 36 17 0 20 58	5 42 17 54 22 14	6 54 19 10 23 22 16 55 2 13	t. t. t. 0·5 1·0
1479 Jan. 8 Fri. 1479 July 4 San. 1479 Dec. 28 Tues. 1480 June 22 Thur. 1482 May 3 Fri.	Pausha 1401 Âshâḍha 1402 Pausha 1402 Âshâḍha 1403 Vaiśâkha 1403	8 3 2 14 22 44 7 51 6 36	6 16 0 24 20 59 6 21 4 56	$ \begin{array}{c cccc} 7 & 24 \\ 1 & 26 \\ 22 & 11 \\ \hline $	8 42 3 2 23 17 — 6 50	9 50 .4 4 24 29 9 21 8 16	t. t. 1. 8·9 t.
1492 Oct. 26 Sat. 1483 Apr. 22 Tacs. 1483 Oct. 15 Wed. 1484 Oct. 4 Mon. 1485 Aug. 25 Thur.	Kûrttika 1405 Vnisûkha 1406 Kûrttika 1406 Âśvina. 1407 Bhûdrapada. 1408	15 44 20 49 23 35 13 42 21 4	14 8 19 1 21 46 12 49 20 38	20 7 22 50. —	21 31 21 20 —	17. 20 22 37 25 24 14 35 21 30	11·1· t. t. 2·7 0·6
1486 Feb. 18 Sat. 1486 Aug. 15 Tues. 1487 Feb. 8 Thur. 1487 Aug. 4 Sat. 1488 Jan. 28 Mon.	Phâlgun 1408 Śrâvaṇa 11 1409 Mâgha 1409 Śrâvaṇa 1410 Mâgha 1410	15 50 8 15 2 21 12 23 17 35	14 6 6 28 0 35 10 46 17 9	15 20 . 7 84 1 46 —	16 20 8 56 2 56 —	17 34 10 2 4 7 14 0 18 1	t. t. t. 11 · 3 0 · 6
1489 June 13 Sat. 1489 Dec. 8 Tines. 1490 June 2 Wed. 1490 Nov. 27 Sat. 1491 May 23 Mon.	Âshûḍlm I 1412 Mûrgaśirshu 1412 Jyeshtha 1413 Mûrgaśirsha 1413 Jyeshtha 1414	6 26 3 54 20 49 4 25 13 56	5 11 2 11 18 57 2 39 12 40	3 26 19 57 3 49	4 22 21 41 5 1	7 41 5 37 22 41 6 11 15 12	5·9 ·t. t. t. 6·0

	Hiadu Month	Time	measured	from Lant en as 6 A		anrisc,	Number of
A. D.	and	Greatest	Begin-	Perio	od of	End	twelfths
Year, Month,	Current Śaka Year.	[i.c. mo- ment of	ning of Eclipse.	Begin-	End.	of Eelipse.	celipsed. ["t."=total
and Day.	[" $w.m.t.$ " = with mean intercalations.]	h. m.	lı. m.	ning.	h. m.	h. 1a.	cclipse.]
1	2	3	4	5	в	7	8
1491 Nov. 16 Wed. 1493 Apr. 1 Mon. 1493 Sept. 25 Wed. 1494 Mar. 21 Fri. 1494 Sept. 15 Mon.	Mârgaśirsha 1414 Chaitra 1416 Âśvina 1416 Chaitra 1417 Bhâdrapada II 1417	4 9 24 28 13 19 24 35 5 31	3 46 22 46 11 36 22 50 3 44	24 4 12 52 25 1 4 49	24 52 13 46 25 9 6 13	4 32 26 10 15 2 26 20 7 18	0 5 t. t. t. t.
1496 Jan. 30 Sat. 1497 Jan. 18 Wed. 1497 July 14 Fri. 1498 Jan. 8 Mon. 1498 July 3 Tues.	Mågha 1418 Mågha 1419 Śråvaṇa l 1420 Pausha 1420 Âshådha 1421	1 13 16 53 8 45 7 25 14 55	0 50 15 7 6 56 5 40 13 20	16 16 8 2 6 51	17 30 9 28 7 59	1 36 18 39 10 34 9 10 16 30	0·5 t. t. t. 10·6
1500 May 13 Wed. 1500 Nov. 5 Thur. 1501 May 3 Mon. 1501 Oct. 26 Tucs. 1502 Oct. 15 Sat.	Jycshtha I 1423 Kûrttika 1423 Vaisâkha 1424 Kûrttika 1424 Kûrttika 1425	14 13 23 48 4 13 7 53 22 7	12 38 22 13 2 23 6 3 21 9	3 27 7 6	4 59 8 40	15 48 25 23 6 3 9 43 23 5	10·8 10·7 t. t. 3·2
1504 Feb. 29 Thur. 1504 Aug. 25 Sun. 1505 Feb. 18 Tues. 1505 Aug. 14 Thur. 1506 Feb. 8 Sun.	Phâlguna. 1426 Bhâdrapada 1427 Phâlguna 1427 Śrâvaņa II 1428 Mâgha. 1428	23 42 15 28 10 44 19 5 2 10	21 59 13 43 8 58 17 23 1 40	23 17 14 54 10 6 18 43	24 7 16 2 11 22 19 27	25 25 17 13 12 30 20 47 2 40	t. t. t. t. 0.8
1507 June 24 Thur. 1507 Dec. 19 Sun. 1508 June 13 Tues. 1508 Dec. 7 Thur. 1509 June 2 Sat.	Âshâḍha 1430 Pausha 1430 Âshâḍha I 1431 Mârgaśirsha 1431 Jyeshṭha 1432	13 33 12 11 4 14 12 24 21 26	12 26 10 28 2 22 10 38 20 2	11 45 3 22 11 47	12 37 5 6 13 1	14 40 13 54 6 6 14 10 22 50	4·4 t. t. t. 7·7
1509 Nov. 26 Mon. 1511 Apr. 13 Sun. 1511 Oct. 6 Mon. 1512 Apr. 1 Thur. 1512 Sept. 25 Sat.	Mûrgasîrsha 1432 Vaisûkha 1 1434 Âśviaa 1434 Chaitra 1435 Âśvina 1435	12 17 7 25 21 44 7 41 13 35	11 51 5 47 20 2 5 54 11 46	21 22 7 1 12 51	22 6 8 21 14 19	12 43 9 3 23 26 9 28 15 24	0.6 11.8 t. t. t.
1513 Mar. 21 Mon. 1513 Sept. 15 Thur. 1514 Feb. 9 Thur. 1515 Jan. 29 Mon. 1515 July 25 Wed.	Chaitra 1486 Bhâdrapada 11 1436 Mâgha 1436 Mâgha 1437 Śrâvaņa 1438	10 25 1 29 9 45 25 36 15 28	10 7 1 18 9 30 23 50 13 42	25 0 14 52	26 12 16 4	10 43 1 40 10 0 27 22 17 14	0·3 0·1 0·2 t. t.
1516 Jan. 19 Sat. 1516 July 13 Sun. 1518 May 24 Mon. 1518 Nov. 17 Wed. 1519 May 14 Sat.	Magha 1438 Śrâvaņa I 1439 Jycshtha 1441 Margaśirsha 1441 Jycshtha I 1442	16 1 21 57 21 42 7 58 11 28	14 16 20 17 20 11 6 23 9 38	15 26 21 43 — — 10 39	16 36 22 11 — — 12 17	17 46 23 37 23 13 9 33 13 18	t. t. 9·2 10·6 t.
1519 Nov. 6 Sun. 1520 Mny 2 Wed. 1520 Oct. 26 Fri. 1522 Mnr. 12 Wed. 1522 Sept. 5 Fri.	Kârttika 1442 Vaiśâkha 1443 Kârttika 1443 Chaitra 1445 Bhâdrapada 1445	16 20 18 14 6 41 7 30 22 49	14 30 17 35 5 39 5 50 21 6	15 33 — 7 14 22 24	7 46 23 14	18 10 18 53 7 43 9 10 24 32	t. 1·4 3·8 t. t.
1523 Mar. 1 Sua. 1523 Aug. 26 Wed. 1524 Feb. 19 Fri. 1525 July 4 Tues. 1525 Dec. 29 Fri.	Phâlguna 1445 Bhâdrapada 1446 Phâlguna 1446 Âshâḍha 1448 Pausha 1448	19 1 1 56 10 41 20 42 20 23	17 14 0 11 10 3 19 49 18 41	18 20 1 23 — — 19 59	19 42 2 29 — — 20 47	20 48 3 41 11 19 21 35 22 5	t. t. 1·3 2·7 t.

	Hindn Month	Time		from Laú en as 5 A		unrise,	Number of
A. D. Year, Month,	and	Greatest phase.	Begin-		od of seuration.	Ead	twelfths celipsed.
and Day.	Current Śaka Year.	[i.e. mo- ment of	ning of Eelipse.	Begin-	Eud.	of Eclipse.	["t."= total
and Day.	["w.m.i." = with mean intercalations.]	lı. m.	h. m.	h. m.	h. m.	h. nı.	eclipse.]
1	2	3	4	. 5	6	7	8
1526 June 24 Sun. 1526 Dec. 18 Tucs. 1527 June 14 Fri. 1527 Dec. 7 Sat. 1529 Apr. 23 Fri.	Âshâdha 1449 Pausha 1449 Âshâdha I 1450 Mârgaśirsha 1450 Vaiśâkha 1452	11 39 20 27 4 55 20 32 14 21	9 48 18 41 3 25 20 1 12 47	10 49 19 49 — — —	12 29 21 5 — —	13 30 22 13 6 25 21 3 15 55	t. t. 9·1 0·9 10·4
1529 Oct. 17 Sun. 1530 Apr. 12 Taes. 1530 Oct. 6 Thur. 1531 Apr. 1 Sat. 1531 Sept. 26 Tues.	Kârttika 1452 Vaiśâkha I 1453 Âśvina 1453 Chaitra 1454 Âśvina 1454	6 11 14 36 21 49 17 49 9 10	4 31 12 47 19 59 17 7 8 40	5 59 13 51 21 3 —	6 23 15 21 22 35 —	7 51 16 25 23 39 18 31 9 40	t. t. t. 1 · 6 0 · 8
1533 Feb. 9 Sun. 1533 Aug. 4 Mon. 1534 Jan. 29 Thur. 1534 July 25 Sat. 1536 June 4 Sun.	Mâgha 1455 Śrâvaṇa 1456 Mâgha 1456 Śrâvaṇa 1457 Jyeshtha 1459	10 15 22 17 24 36 5 9 5 10	8 30 20 34 22 50 3 25 3 46	9 40 21 51 24 0 4 39	10 50 22 43 25 12 5 39	12 0 24 0 26 22 6 53 6 34	t. t. t. t. 7 · 7
1536 Nov. 27 Mon. 1537 May 24 Thur. 1537 Nov. 16 Fri. 1538 May 14 Tues. 1538 Nov. 6 Wed.	Mârgasîrsha 1459 Jyeshtha 1460 Mârgasîrsha 1460 Jyeshtha I 1461 Kârttika 1461	16 13 18 32 24 53 0 59 15 18	14 39 16 40 23 3 0 3 14 15	17 41 24 5	19 23 25 41 —	17 47 20 24 26 43 1 55 16 21	10·4 t. t. 3·0 3·9
1540 Mar. 22 Mon. 1540 Sept. 16 Thur. 1541 Mar. 12 Sat. 1541 Sept. 5 Mon. 1542 Mar. 1 Wed.	Chaitra 1463 Âśvina I. 1463 Chaitra I. 1464 Bhâdrapada 1464 Phâlguna 1464	15 13 6 17 3 10 8 57 19 10	13 35 4 37 1 21 7 10 18 27	6 3 2 27 8 18	6 31 3 53 9 36 —	16 51 7 57 4 59 10 44 19 53	11.8 t. t. t. 1.7
1543 July 16 Mon. 1544 Jan. 10 Thur. 1544 July 4 Fri. 1544 Dec. 29 Mon. 1545 June 24 Wed.	Śrâvaṇa I 1466 Pausha 1466 Âshâḍha 1467 Pausha 1467 Âshâḍha 1468	3 57 4 38 19 5 4 31 12 19	3 22 2 56 17 15 2 44 10 44	4 16 18 17 3 52	5 0 19 53 5 10 —	4 32 6 20 20 55 6 18 13 54	1·1 t. t. t. 10·8
1545 Dec. 18 Fri. 1547 May 4 Wed. 1547 Oct. 28 Fri. 1548 Apr. 22 Sun. 1548 Oct. 17 Wed.	Pausha 1468 Vaiśâkha 1470 Kârttika 1470 Vaiśâkha 1471 Kârttika 1471	4 45 21 2 14 43 21 25 6 6	4 10 19 32 13 4 19 35 4 16	14 43 20 37 5 18	 14 43 22 13 6 54	5 20 22 32 16 22 23 15 7 56	1·1 8·9 t. t. t.
1549 Apr. 12 Fri. 1549 Oct. 6 Sun. 1551 Feb. 20 Fri. 1551 Aug. 16 Sun. 1552 Feb. 10 Wed.	Vaiśākha I. 1472 Āśvina 1472 Phâlguna 1473 Bhâdrapada I. 1474 Mâgha. 1474	1 8 17 3 18 42 5 9 8 59	0 13 16 21 16 57 3 30 7 13	18 9 5 9 8 23	— 19 15 5 9 9 35	2 3 17 45 20 27 6 48 10 45	2·9 1·6 t. t. t.
1552 Aug. 4 Thur. 1554 June 15 Fri. 1554 Dec. 8 Sat. 1555 June 4 Tues. 1555 Nov. 28 Thur.	Śrâvana 1475 Âshâḍha I 1477 Mârgaśîrsha 1477 Jyeshtha 1478 Mârgaśîrsha 1478	12 23 12 30 24 33 25 36 9 33	10 36 11 15 23 0 23 44 7 43	11 44 — 24 44 8 45	13 2 — 26 28 10 21	14 10 13 45 26 6 27 28 11 23	t. 5·9 10·1 t. t.
1556 May 24 Sun. 1556 Nov. 16 Mon. 1558 Apr. 2 Sat. 1558 Sept. 27 Tues. 1559 Mar. 23 Thur.	Jycshtha 1479 Mârgaśirsha 1479 Chaitra 1481 Âśvina 1481 Chaitra 1482	7 37 24 6 22 45 13 54 11 16	6 29 23 1 21 10 12 17 9 26	10 30	12. 2	8 45 25 11 24 20 15 31 13 6	4.6 4.2 10.8 11.3 t.

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A.D.	Hindu Month	Tim	e 1		from Lank n as 6 A.		nrise,	Number of
	and	Greates phase.	- 1	Begin-	Perio	,	End	twelfths
Year, Month,	Curreut Śaka Year.	[1.e. mo)-	ning of Eclipse.	Begin-	End.	of Eelipse.	celipsed.
and Day.	["w.m.i." = with mean intercalations.]	fullmoon	n]	lı. m.	ning.	h. m.		["t."=total eclipse.]
1	2	3	\dashv	4	5	8	h. m.	8
1559 Sept. 16 Sat. 1560 Mar. 12 Tues. 1560 Sept. 4 Wed. 1562 Jan. 20 Tues. 1562 July 16 Thur.	Âśvina I 1482 Phâlguna 1482 Bhâdrapada 1483 Mâgha 1484 Śrâvana I 1485	16 2 3 26 16 11 12 42 2 38	6 1 2	14 13 2 35 15 36 11 1 0 49	15 19 	16 45 — — — — — — — — — — — — — — — — — —	17 51 4 17 16 46 14. 23 4 27	t. 2·5 1·1 . t.
1563 Jan. 9 Sat. 1563 July 5 Mon. 1563 Dec. 29 Wed. 1565 May 15 Taes. 1565 Nov. 7 Wed.	Pausha 1485 Âshûdha 1486 Pausha 1486 Jyeshtha 1488 Kârttika 1488	12 27 19 43 12 59 3 38 23 24	5 9 8	10 40 18 5 12 21 2 16 21 47	11 47 19 29 —	13 7 20 1	14 14 21 25 13 37 5 0 25 1	t. t. 1·3 · 7·2 11·4
1566 May 4 Sat. 1566 Oct. 28 Mon. 1567 Apr. 23 Wed. 1567 Oct. 18 Sat. 1569 Mar. 3 Thur.	Vaiśâkha 1489 Kârttika 1489 Vaiśâkha 1490 Kârttika 1490 Phâlguna 1491	14 35 8 19 0 5	9	2 16 12 42 7 14 0 14 1 24	3 17 13 44 — — 2 39	4 57 15 20 — 3 37	5 58 16 22 9 24 1 44 4 52	t. t. 4·1 · 1·9 t.
1569 Aug. 26 F1i. 1570 Feb. 20 Mon. 1570 Aug. 15 Tues. 1571 Aug. 5 Sun. 1572 June 25 Wed.	Bhâdrapada 1492 Phâlguna 1492 Bhâdrapada I 1493 Śrâvana 1494 Âshâḍha 1495	12 17 17 10 19 45 9 50 19 5	6 8 6	10 36 15 29 17 59 9 16 18 47	16 37 19 4	17 55 20 32 —	13 46 19 3 21 37 10 36 21 1	10.6 t. t. 1.5 4.4
1572 Dec. 19 Fri. 1573 June 15 Mon. 1573 Dec. 8 Tues. 1574 June 4 Fri. 1574 Nov. 28 San.	Pausha 1495 Ashâḍha I 1496 Mârgaśirsha 1496 Jyeshṭha 1497 Mârgaśirsha 1497	8 5 8 3 18 1 14 1 8 5	5 6 2	7 25 6 44 16 26 12 53 7 47	7 45 17 28	9 25 19 4 —	10 31 10 26 20 6 15 31 10 1	10·1 t. t · 6·7 4·4
1576 Apr. 13 Fri. 1576 Oct. 7 Sun. 1577 Apr. 2 Tues. 1577 Sept. 26 Thur. 1578 Mar. 23 Sun.	Vaiśâkha 1499 Aśvina 1499 Chaitra 1500 Áśvina 1500 Chaitra 1501	6 12 21 33 19 1 23 1 11 3	5 1 7	4 40 20 0 17 21 21 27 10 38	18 22 22 31	20 0 24 3	7 44 23 10 21 1 25 7 12 34	9·6 10·6 t. t. 3·3
1578 Sept. 15 Mon. 1580 Jan. 31 Sun. 1580 July 26 Tues. 1581 Jan. 19 Thur. 1581 July 16 Sun.	Aśvina 1 1501 Mâgha 1502 Śrâvana 1503 Mâgha 1503 Śrâvaṇa 1 1504	20 4 10 20 2	4 0 9 4 2	22 35 19 0 8 23 18 37 1 28	20 24 9 31 19 43 2 42	20 56 10 47 21 5 3 42	24 13 22 20 11 55 22 11 4 56	2·3 t. t. t. t.
1582 Jan. 8 Mon. 1583 May 26*Sun. 1583 Nov. 19 Tues. 1584 May 14 Thur. 1584 Nov. 7 Sat.	Pausha 1504 Jyeshtha 1506 Margasirsha 1506 Jyeshtha 1507 Karttika 1507	8 10 4	3 9 3 2	20 33 9 2 6 32 8 51 21 12	- - 9 51 22 13	11 35 23 51	21 53 11 24 9 46 12 35 24 52	1·5 5·1 11·2 t. t.
1585 May 3 Mon. 1585 Oct. 28 Thur. 1587 Mar. 14 Tues. 1587 Sept. 6 Wed. 1588 Mar. 2 Sat.	Vajšakha 1508 Karttika 1508 Chaitra 1510 Bhadrapada 1510 Phalguna 1510	9 11 2	5 5 3 25 27	14 11 8 16 9 41 17 54 23 39	11 1 24 45	11 45 26 9	16 39 9 54 13 5 20 56 27 15	5·7 2·3 t. 9·4 t.
1588 Aug. 26 Mon. 1589 Aug. 15 Fri. 1590 July 7 Tues. 1590 Dec. 30 Wed. 1591 June 26 Sat.	Bhâdrapada 1511 Bhâdrapada I. 1512 Âshâḍba 1513 Pausha 1513 Âshaḍha 1514	17 3 3 1 17 1	5 8 2 .7	1 25 16 43 2 20 15 44 13 42	2 28 — — — — 14 44	4 2 — — 16 20	5 5 18 33 4 4 18 50 17 22	t. 2·9 2·6 9·9 t.

Oppolzer, who calculates by New Style from A. D. 1582.

4.70	Hindu Month	7	ime		ed from Lan aken as 6 A		unrise,	Number of
A. D. Year, Month,	and	Grea pha	iest	Begin	total al	od of scuration.	End	twelfths
	Current Saka Year.	[i.e. 1 men	mo- t of	ning o	Begin-	End.	of Eclipse.	eclipsed. ["t."= total
and Day.	["w.m.i." = with mean intercalations.]	fullm h.		h. m		h. m.	h. m.	eclipse.]
1	2	3		4	5	6	7	8
1591, Dec. 20 Mou. 1592 June 14 Wed. 1592 Dec. 8 Fri. 1594 Apr. 24 Wed. 1594 Oct. 19 Sat.	Pausha 1514 Âshâḍha 1 1515 Mârgaśîrsha 1515 Vaiśâkha 1517 Kârttika 1517	. 3 .20 .17 13 . 5	3 41 42 36 22	1 1 19 1 16 3 12 3 4	3 — 5 — 8 —	3 52	4 53 22 9 18 49 15 4 6 55	t. 8·5 4·5 8·4 9·9
1595 Apr. 14 Mon. 1595 Oct. 8 Wed. 1596 Apr. 2 Fri. 1596 Sept. 26 Sun. 1598 Feb. 11 Sat.	Vaišākha 1518 Âśvina 1518 Chaitra 1519 Âśviua 1519 Māgha 1520	2 . 6 19 6 4	59 40 35 46 32	1 4 5 18 2 5 4 2 5	8 —	3 49 7 28 —	4 50 8 30 20 42 7 43 6 10	t. t. 4·4 3·1 11·8
1598 Aug. 6 Sun. 1599 Jan. 31 Wed. 1599 July 27 Fri. 1600 Jan. 20 Sun. 1601 June 5 Fri.	Śrâvaņa 1521 Mâgha 1521 Śrâvaņa 1522 Mâgha 1522 Jyeshtha 1524	. 5	50 14 42 27 39	16 2 2 8 5 4 4 15 4	6 10 4	18 21 4 56 11 20 	19 34 6 2 12 28 6 11 17 37	t. t. t. · 1·8 3·3
1601 Nov. 29 Sun. 1602 May 25 Tues. 1602 Nov. 19 Fri. 1603 May 14 Sat. 1603 Nov, 8 Tues.	Mårgasirsha 1524 Jyeshtha 1525 Mårgasirsha 1525 Jyeshtha 1526 Kårttika 1526	17 17 7 22 17	0 21 40 33 11	15 2 15 3 5 5 21 1 16 1	$ \begin{array}{c cccc} 0 & 16 & 31 \\ 0 & 6 & 51 \\ 0 & & \end{array} $	18 11 8 29 —	18 36 19 12 9 30 23 56 18 3	11·1 t. t. 7·4 2.6
1605 Mar. 24 Sun. 1605 Sept. 17 Tues. 1606 Mar. 14 Fri. 1606 Sept. 6 Sat. 1607 Aug. 27 Thur.	Chaitra 1528 Âśviua 1528 Chaitra I 1529 Bhâdrapada 1529 Bhâdrapada 1530	19 2 9 10 1	27 45 24 57 30	17 4 1 1 7 3 9 0 2	$ \begin{array}{c cccc} 7 & - & - & \\ 5 & 8 & 40 \\ 6 & 10 & 7 \end{array} $	19 37 10 8 11 47	21 7 4 13 11 13 12 48 2 34	t. 8·4 t. t. 4·0
1608 July 17 Sun, 1609 Jan. 10 Tues. 1609 July 6 Thur. 1609 Dec. 30 Sat, 1610 June 26 Tues.	Śrâvaṇa 1531 Pausha 1531 Âshâḍha 1532 Pausha 1532 Âshâḍha 1533	10 1 22 11 3	34 42 26 46 10	10 0 1 20 3 9 5 1 3	$ \begin{array}{c cccc} 7 & 21 & 43 \\ 6 & 10 & 57 \end{array} $	23 9 12 35	11 5 3 14 24 15 13 36 4 44	0·9 9·8 t. t. 10·2
1610 Dcc. 20 Thur. 1612 May 4 Mon. 1612 Oct. 29 Thur. 1613 Apr. 24 Sat. 1613 Oct. 18 Mon.	Pausha. 1533 Vaiśákha 1535 Kârttika. 1535 Vaiśákha 1536 Kârttika. 1536	2 .20 13 10 14	42 51 20 43 10	1 3 19 3 11 5 8 5 12 2	$\begin{bmatrix} 0 & - & - \\ 0 & - & \\ 1 & 9 & 52 \end{bmatrix}$	11 34 14 59	3. 51 22. 12 14. 50 12. 35 16. 0	4·7 7·0 9·1 t. t.
1614 Apr. 14 Thur. 1614 Oct, 7 Fri. 1616 Fcb. 22 Thur. 1616 Aug, 16 Fri. 1617 Feb. 10 Mon.	Vaisakha 1537 Âsvina 1537 Phâlguna 1538 Bhâdrapada 1539 Mâgha 1539	3 14 12 25 11	30 21 16 37 59	2 1 13 1 10 3 23 5 10 1	$\begin{bmatrix} 7 & - \\ 9 & - \\ 6 & 25 & 17 \end{bmatrix}$	25 57 12 43	4 · 43 15 · 25 13 · 53 27 · 18 13 · 48	5·4 4·0 11·3 t. t.
1617 Aug. 6 Wed. 1618 Jan. 30 Fri. 1619 June 16 Wed. 1619 Dec. 11 Sat. 1620 June 4 Sun.	Śrâvana 1540 Mâgha 1540 Âsbâḍba 1542 Mârgaśîrsha 1542 Jyeshṭha 1543	18 13 23 1 23	16 35 4 51 53	22 2 0 1	7 —	19 0	20 5 14 23 23 43 3 27 25 43	t. 2·2 1·4 10·9 t.
1620 Nov. 29 Wed, 1621 May 25 Fri. 1621 Nov. 19 Mon. 1623 Apr. 5 Sat. 1623 Sept. 28 Snn.	Mârgasîrsha 1543 Jyeshtha 1544 Mârgasîrsha 1544 Chaitra 1546 Âśvina 1546	16 . 5 . 1 . 3 . 10	20 34 23 25 20		3 — 8 — 9 —	17 9	18 10 7 5 2 18 5 1 11 43	t. 9·4 2·9 10·9 7·4

A.D.	Hindu Month	Time	messured tak	from Laŭ en as 6 A		nurise,	Number of
Year, Month,	and	Grentest phase.	Begin-		od of scuration.	End	twelfths eclipsed.
and Day.	Current Śaka Year.	[i.c mo- ment of fullmood	ning of Eclipse.	Begin- ning.	End.	of Eclipse.	["t."= total
	["w, m, t," = with mean intercalations.]	h. in.	h. m.	h. m.	h. m.	h. ա.	cclipse.]
1	2	3	4	5	в	7	8
1624 Mar. 24 Wed. 1624 Sept. 16 Thur. 1625 Mar, 13 Suu. 1625 Sept. 6 Tues. 1627 Jan. 21 Sun.	Chaitea 1547 Âśvina 1547 Chaitea I 1548 BhAdrapada 1548 Magha 1549	17 12 18 43 24 12 9 26 9 59	15 22 16 51 23 46 8 14 8 26	16 25 17 52 — — —	17 59 19 34 — —	19 2 20 35 24 38 10 38 11 32	t. t. 0·6 5·3 10·0
1627 July 18 Wed. 1628 Jan. 10 Thur. 1628 July 6 Sun. 1628 Dec. 30 Tucs. 1630 May 16 Sun.	Śrâvaņa I 1550 Pausha 1550 Âshâḍta 1551 Pausha 1551 Jyeshṭha 1553	5 22 20 31 9 40 11 32 4 3	3 36 18 41 8 0 10 23 2 51	4 46 19 42 9 30 —	5 58 21 20 9 50 —	7 8 22 21 11 20 12 41 5 15	t. t. t. 4·7 5·3
1630 Nov. 9 Tucs. 1631 May 5 Thur. 1631 Oct. 29 Sat. 1632 Apr. 24 Tucs. 1632 Oct. 17 Wed.	Kârttika 1553 Vaiśâkha 1554 Kârttika 1554 Vaiśâkla 1555 Kârttika 1555	21 21 18 17 21 55 11 16 22 4	19 53 16 25 20 4 9 56 20 54	17 25 21 5 —	19 9 22 45 —	22 49 20 9 23 46 12 36 23 14	8·5 t. t. 6·8 4·8
1634 Mar. 4 Tucs. 1634 Ang. 28 Thur. 1635 Feb. 21 Sat. 1635 Ang. 18 Tucs. 1636 Feb. 10 Wed.	Phâlguna 1556 Bhâdrapada 1557 Phâlguna 1557 Bhâdrapada I 1558 Mâglia 1558	19 55 9 23 19 39 1 52 21 39	18 20 7 46 17 49 0 2 20 46	18 53 1 5	20 25 2 39	21 30 11 0 21 29 3 42 22 32	10·6 11·4 t. t. 2·7
1636 Aug. 6 Sat. 1637 Dec. 21 Thur. 1638 June 16 Sat. 1638 Dec. 10 Mon. 1639 June 5 Wed.	Śrâvana 1559 Pausha 1560 Âshâdha 1561 Mârgaśirsha 1561 Jyeshtha 1562	14 33 10 43 6 26 25 1 12 35	14 7 9 7 4 38 23 11 10 59	5 41 24 12 	7 8 25 50	14 59 12 19 8 14 26 51 14 11	0.6 10.0 t. t. 11.1
1639 Nov. 30 Sat. 1641 Apr. 15 Thur. 1641 Oct. 8 Fri. 1642 Apr. 4 Mon. 1642 Sept. 28 Wed.	Mûrgaśirsha 1562 Vaisākha 1561 Âśvina 1561 Chaitra 1565 Âśvina 1565	9 41 11 20 18 0 21 55 2 45	8 46 9 47 16 41 23 5 0 53	21 6 1 54	25 41 3 36	10 36 12 53 19 19 26 45 4 37	2·0 9·9 6·6 t. t.
1643 Mar. 25 Sat. 1643 Sept. 17 Sua. 1645 Jan. 31 Fri. 1645 July 28 Mon. 1646 Jan. 21 Wed.	Chaitra 1566 Âśvina 1566 Magha 1567 Śrâvaṇa 1568 Magha 1568	7 34 17 26 18 13 12 21 5 7	6 51 16 9 16 41 10 38 3 17	- - 11 55 4 18		8 17 18 43 19 45 14 4 6 57	1·7 6·2 9·6 t. t.
1646 July 17 Fri. 1647 Jaa. 10 Sun. 1648 May 26 Fri. 1648 Nov. 20 Mon. 1649 May 16 Wed.	Śrâvaṇa I 1569 Pausha 1569 Jyeshtha 1571 Mârgaśirsha 1571 Jyeshtha 1572	16 11 20 25 11 17 5 29 1 53	14 27 19 16 10 13 4 2 0 1	15 40 — — 1 2	16 42 — — 2 44	17 55 21 34 12 21 6 56 3 45	t. 4·7 4·0 8·3 t.
1649 Nov. 9 Fri. 1650 May 5 Sun. 1650 Oct. 29 Tues. 1652 Mar. 15 Moa. 1652 Sept. 7 Tues.	Kârtttika 1572 Vaiśâkha 1573 Kârttika 1573 Chaitra 1575 Bhâdrapada 1575	5 41 18 57 5 55 3 18 17 23	3 50 17 30 4 42 1 47 15 49	4 51 — — — —	6 31 — — — —	7 32 20 24 7 8 4 49 18 57	t. 8·2 5·4 9·5 10·3
1653 Mar. 4 Fri. 1653 Aug. 28 Sun. 1654 Feb. 21 Tues. 1654 Aug. 17 Thur. 1656 Jan. 1 Tues.	Phâlguna 1575 Bhâdrapada 1576 Phâlguna 1576 Bhâdrapada I 1577 Pansha 1578	3 5 9 40 5 33 21 46 19 36	1 15 7 50 4 35 21 0 18 1	2 17 8 51 — —	3 53 10 29 — — —	4 55 11 30 6 31 22 32 21 11	t. t. 3·3 2·0 10·8

4.70	Hindu Month	Time		from Lanl en as 6 A		unrisc,	Number of
A.D.	and	Greatest phase.	Begin-	1	od of curation.	End	twelfths
Year, Month,	Current Śaka Year.	[i.e. mo- ment of	ning of Eelipse.	Begin-	End.	of Eclipse.	eclipsed.
and Day.	["w.m.i." = with mean intercalations.]	h. m.	h. m.	h. m.	h. m.	h. m.	["t." = total eclipse.]
1	2	. 3	4	5	6	7	8
1656 June 26 Thur. 1656 Dec. 21 Sun. 1657 June 15 Mon. 1657 Dec. 10 Thur. 1659 Apr. 26 Tues.	Âshûḍha 1579 Pausha 1579 Âshûḍha 1580 Mûrguśîrsha 1580 Vaiśākha 1582	12 55 9 42 19 36 17 56 19 1	11 10 7 52 17 55 17 0 17 33	12 20 8 53 19 17 —	13 30 10 31 19 55 —	14 40 11 32 21 17 18 52 20 29	f. t. t. 3·0 8·6
1659 Oct. 20 Thur. 1660 Apr. 15 Sun. 1660 Oct. 8 Mon. 1661 Apr. 4 Thur. 1661 Sept. 28 Sat.	Kûrttika 1582 Vaiśâkha 1583 Âśvina 1583 Chaitra 1584 Âśvina 1584	1 56 8 24 10 52 14 49 1 40	0 41 6 33 9 0 13 55 0 19	7 34 10 0 —	9 14 11 44 —	3 11 10 15 12 44 15 43 3 1	5·9 t. t. 2·8 7 0
1663 Feb. 12 Thur. 1663 Aug. 8 Sat. 1664 Feb. 1 Mon. 1664 July 27 Wed. 1665 Jan. 21 Sat.	Phâlguna 1585 Ŝrâvaṇa 1586 Mâgha 1586 Śrâvaṇa 1587 Mâgha 1587	2 26 19 21 13 47 22 41 5 14	0 55 17 42 11 57 20 54 4 3	12 58 22 2	14 36 23 20	3 57 21 0 15 37 24 28 6 25	9·2 11·9 t. t. 5·0
1666 June 6 Wed. 1666 Dec. 1 Sat. 1667 May 27 Mon. 1667 Nov. 20 Wed. 1668 May 16 Sat.	Jyeshtha 1589 Mårgasirsha 1589 Jyeshtha 1590 Mårgasirsha 1590 Jyeshtha 1591	18 25 13 35 9 23 13 33 2 32	17 34 12 10 7 32 11 41 1 0	8 33 12 42	10 13 14 24	19 16 15 0 11 14 15 25 4 4	2·5 7·9 t. t. 9·7
1668 Nov 8 Sun. 1670 Mar. 26 Sat. 1670 Sept. 18 Sun. 1671 Mar. 15 Wed. 1671 Sept. 8 Fri.	Kârttika 1591 Chaitra 1593 Âśvina 1593 Chaitra 1594 Bhâdrapada 1594	13 55 10 33 25 27 10 24 17 27	12 40 9 5 23 56 8 33 15 36	9 34 16 37	- - 11 14 18 17	15 10 12 1 26 58 12 15 19 18	5·8 8.6 9·3 t. t.
1672 Mar, 3 Sun. 1672 Ang. 28 Wed. 1674 Jan. 12 Mon. 1674 July 7 Tues. 1675 Jan. 1 Fri.	Phâlguna 1594 Bhâdrapada 1595 Pausha 1596 Âshâdha 1597 Pausha 1597	13 24 5 7 4 26 19 34 18 22	12 20 4 10 2 51 17 52 16 32	19 13 17 33	- 19 55 19 11	14 28 6 4 6 .1 21 16 20 12	4.0 3·1 10·6 t. t.
1675 June 27 Sun. 1675 Dec. 22 Wed. 1677 May 7 Mon. 1677 Oct. 30 Tues. 1678 Apr. 26 Fri.	Âshâdha 1598 Pausha 1598 Vaiśâkha 1600 Kârttika 1600 Vaiśâkha 1601	2 39 2 20 2 36 9 58 15 48	0 54 1 25 1 16 8 44 13 56	2 4 ————————————————————————————————————	3 14 — — — 16 40	4 24 3 15 3 56 11 12 17 40	t. 2·9 6·9 5·6 t.
1678 Oct. 19 Sat. 1679 Apr. 15 Tues. 1679 Oct. 9 Thur. 1681 Feh. 22 Tues. 1681 Ang. 19 Fri.	Kârttika 1601 Vaiśâkha 1602 Âśvina 1602 Phâlguna 1603 Bhâdrapada 1604	19 11 21 52 9 59 10 32 2 28	17 19 20 48 8 35 9 3 0 54	18 19	20 3	21 3 22 56 11 23 12 1 4 2	t. 4·0 7·7 8·8 10·3
1682 Feb. 11 Sat. 1682 Aug. 8 Tues. 1683 Feb. 1 Thur. 1683 July 28 Sat. 1684 June 17 Tues.	Phâlguna 1604 Śrâvaṇa 1605 Mâgha 1605 Śrâvaṇa 1606 Âshâḍha 1607	22 19 5 20 13 54 5 53 1 33	20 28 3 31 12 42 5 17 1 5	21 29 4 35 — — —	23 9 6 5 —	24 10 7 9 15 6 6 29 2 1	t. t. 5·3 1·2 0.7
1684 Dec. 11 Thur. 1685 June 6 Sat. 1685 Nov. 30 Mon. 1686 May 27 Thur. 1686 Nov. 19 Fri.	Mårgaśîrsha 1607 Jycshtha 1608 Mårgaśîrsha 1608 Jyeshtha 1609 Mårgaśîrsha 1609	21 48 16 49 21 31 10 · 3 22 4	20 23 14 59 19 39 8 26 20 48	16 2 20 40 ·	17 36 22 22 —	23 13 18 39 23 23 11 40 23 20	7·9 t. t. 11·2 6·1

	Hindu Month	Time	measured tak	from Lau		unrise,	Number of
A. D. Year, Month,	and	Greatest phase.	Begin-	l'eri	od of senration.	End	twelfths
and Day.	Current Śaka Ycar.	[i.c. mo- ment of	ning of Eclipse.	Begin-	End.	of Eclipse.	eclipsed. [" t ." = total
	["w, m, t." = with mean laterealations.]	h. m.	lı. ın.	h. m.	h. m.	h. m.	eclipse.]
11	2	3 .	4	5	в	7	8
1688 Apr. 5 Thur. 1688 Sept. 29 Sat. 1689 Mar. 25 Mon. 1689 Sept. 18 Wed. 1690 Mar. 14 Fri.	Chaitra 1611 Âśvina 1611 Chaitra 1612 Âśvina 1612 Chaitra 1613	17 38 9 39 17 39 25 21 21 7	16 16 8 11 15 47 23 32 19 57	16 48 24 33 —	18 30 26 15	19 0 11 7 19 31 27 16 22 17	7·3 8·5 t. t. 4·9
1690 Sept. 8 Mon. 1692 Jan. 23 Sat. 1692 July 18 Mon. 1693 Jan. 12 Thur. 1693 July 7 Fri.	Bhâdrapada 1613 Mâgha 1614 Śrâvaṇa 1615 Pausha 1615 Âshâḍha 1616	12 33 13 14 2 13 3 3 9 43	11 27 11 40 0 37 1 12 7 55	2 13 9 1	3 53 10 25	13 39 14 48 3 49 4 54 11 31	4·3 10·4 10·9 . t. t.
1694 Jan. 1 Mon, 1694 June 26 Tues. 1695 May 18 Sat. 1695 Nov. 10 Sun. 1696 May 6 Wed.	Pausha - 1616 Âshâdha 1617 Jyeshtha 1618 Kârttika 1618 Vaiśâkha 1619	10 36 23 55 10 8 18 2 23 2	9 40 23 34 8 55 16 50 21 10		23 54	11 32 24 16 11 21 19 14 24 54	3·0 0·4 5·5 5·2 t.
1696 Oct. 30 Fri. 1697 Apr. 26 Mon. 1697 Oct. 19 Tucs. 1699 Mar. 5 Sun. 1699 Aug. 30 Wed.	Kûrttika 1619 Vaiśâkha 1620 Kûrttika 1620 Phâlguna 1621 Bhûdrapada 1622	3 32 4 47 18 29 18 23 9 40	1 40 3 33 17 2 17 1 8 11	2 40 — — —	4 24	5 24 6 1 19 56 19 55 11 9	t. 5·7 8·2 8·8
1700 Feb. 23 Fri. 1700 Aug. 18 Sun. 1701 Feb. 11 Tues. 1701 Aug. 7 Thur. 1702 Dec. 23 Wed.	Phâlguna 1622 Bhâdrapada 1623 Mâgha 1623 Śrâvaṇa 1624 Pausha 1625	6 43 12 3 22 31 12 38 6 0	4 52 10 13 21 17 11 45 4 37	5 53 11 14 —	7 33 12 52 - -	8 34 13 53 23 45 13 31 7 23	t. t. 5·6 2·7 7·5
1703 June 17 Thur. 1703 Dec. 12 Sun. 1704 June 6 Tucs. 1704 Nov. 30 Thur 1706 Apr. 16 Tues.	Ashûdba 1626 Mûrgaśirsha 1626 Jycshtha 1627 Mûrgaśirsha 1627 Vaiśûkha 1629	24 19 5 32 17 29 6 16 24 36	22 31 3 40 15 47 4 58 23 22	23 37 4 41 17 8·	25 1 6 . 23 17 50	26 7 7 24 19 11 7 34 25 50	t. t. 6·5 5·7
1706 Oct. 10 Thnr. 1707 Apr. 5 Sat. 1707 Sept. 30 Tues. 1708 Mar. 25 Thur. 1708 Sept. 18 Sat.	Aśvina 1629 Chaitra 1630 Âśvina 1630 Chaitra 1631 Âśviua 1631	18 4 24 45 9 27 4 42 20 2	16 40 22 53 7 35 3 26 18 50	23 53 8 35 —	25 37 10 19	19 28 26 37 11 19 5 58 21 14	7·7 t. t. 6·1 5·2
1710 Feb. 2 Thur. 1710 July 29 Sat. 1711 Jan. 23 Tues. 1711 July 18 Wed. 1712 Jan. 12 Sat.	Mâgha 1632 Śrâvaṇa 1633 Mâgha 1633 Śrâvaṇa 1634 Pausha 1634	21 55 9 0 11 34 16 55 18 51	20 22 7 29 9 43 15 5 17 53	10 41 16 8	12 24 17 42	23 28 10 31 13 25 18 45 19 49	. 10·1 9·4 t. t. 3·2
1712 July 7 Mon. 1713 May 28 Thur. 1713 Nov. 21 Sat. 1714 May 18 Tues. 1714 Nov. 10 Wed.	Ashâdha 1635 Jyeshtha 1636 Mârgaśîrsha 1636 Jyeshtha 1637 Kârttika 1637	7 26 17 34 2 20 6 11 12 5	6 37 16 31 1 9 4 20 10 13	5 21 11 14	$\begin{bmatrix} - \\ - \\ 12 & 56 \end{bmatrix}$	8 15 18 37 3 31 8 2 13 57	2·3 3·9 5·0 t. t.
1715 May 7 Sat. 1715 Oct. 31 Mon. 1717 Mar. 16 Sat. 1717 Sept. 9 Mon. 1718 Mar. 5 Wed.	Vaiśâkha 1638 Kârttika 1638 Chaitra 1640 Bhâdrapada 1640 Phâlguna 1640	11 34 3 3 2 18 16 57 14 58	10 12 1 33 0 55 15 34 13 6	14 7	15 49	12 56 4 33 3 41 18 20 16 50	7·3 8·9 7·4 7·5 t.

A. D.	Hindu Month	Time		from Land en as 6 A		unrise,	Number of
A. D. Year, Month,	and	Greatest phase.	Begin- uing of	Perio	od of curation.	End of	twelfths eclipsed.
and Day.	Current Saka Year. ["w.m.i." = with mean intercalations.]	[i.e.mo- ment of fullmoon]	Eclipse.	Begin.	End.	Eclipse.	["t." = total]
1	2	h. m.	h. m.	h. m.	h. m.	h. m.	eclipse.]
1718 Aug. 29 Fri.	Bhâdrapada	18 55	17 3	18 4	19 46	20 47	8 t.
1719 Feb. 23 Mon. 1719 Aug. 18 Tues. 1721 Jan. 2 Mon. 1721 June 28 Wed.	Phâlguna 1641 Bhâdrapada 1642 Pausha 1643 Âshâdha 1644	7 3 19 28 .14 11 7 46	5 . 47 18 21 12 48 6 1	- - 7 11	8 21	8 19 20 35 15 34 9 31	6·1 4·4 7·4 . t.
1721 Dec. 22 Fri. 1722 June 17 Sun. 1722 Dec. 11 Tues. 1724 Apr. 27 Mon. 1724 Oct. 21 Wed.	Pansha 1644 Ashâḍha 1645 Mârgaśîrsha 1645 Vaiśâkha 1647 Kârttika 1647	13 38 24 55 14 33 7 22 2 32	11 46 23 10 13 14 6 17 1 10	12 47 24 22 — —	14 29 25 28 - -	15 30 -26 40 15 52 8 27 3 54	t. t. 6.7 4.2 7.2
1725 Apr. 16 Fri. 1725 Oct. 10 San. 1726 Apr. 5 Tues. 1726 Sept. 30 Fri. 1728 Feb. 14 Wed.	Vaisâkha 1648 Âśvina 1648 Chaitra 1649 Âśvina 1649 Phâlguna 1650	7 42 17 38 12 11 3 40 6 32	5 51 15 46 10 49 2 24 5 0	6 52 16 46 — —	8 32 18 30 — —	9 33 19 30 13 33 4 56 8 4	t. t. 7·3 6·0 9.7
1728 Aug. 8 Thur. 1729 Feb. 2 Sun. 1729 July 28 Mon. 1730 Jan. 23 Fri. 1730 July 18 Sat.	Śrâvaņa 1651 Mâgha 1651 Śrâvaṇa 1652 Mâgha 1652 Śrâvaṇa 1653	15 53 20 1 24 8 2 59 14 54	14 28 18 10 22 17 · 2 0 13 51	19 11 23 18 —	20 51 24 58 —	17 18 21 52 25 59 3 58 15 57	7·8 t. t. 3·4 3·9
1731 June 9 Wed. 1731 Dec. 2 Thur. 1732 May 28 Sun. 1732 Nov. 20 Moa. 1733 May 17 Thur,	Jyeshtha 1654 Margasirsha 1654 Jyeshtha 1655 Margasirsha 1655 Jyeshtha 1656	0 53 10 40 13 10 20 42 18 12	0 5 9 30 11 20 18 50 16 42	- 12 22 19 51 -	13 58 21 33	1 41 11 50 15 0 22 34 19 42	2·2 4·8 t. t. 9·1
1733 Nov. 10 Sat. 1735 Mar. 27 Thur. 1735 Sept. 20 Sat. 1736 Mar. 15 Mon. 1736 Sept. 9 Thur.	Kârttika 1656 Chaitra 1658 Âśvina 1658 Cháitra 1659 Bhūdrapada 1659	11 42 10 3 -24 21 23 12 1 56	10 12	22 20 1 4	- - 24 4 2 48	13 .12 11 21 25 38 25 4 3 48	8·9 6·5 6·3 t.
1737 Mar. 5 Sat. 1737 Aug. 29 Mon. 1739 Jan. 13 Sat. 1739 July 9 Mon. 1740 Jan. 2 Wed.	Phâlguna 1659 Bhâdrapada 1660 Pausha 1661 Âshâdha 1662 Pausha 1662	15 27 2 28 22 18 15 12 21 37	14 8 1 12 20 56 13 29 19 45	- - 14 47 20 46	15 37 22 28	16 46 3 44 23 40 16 55 23 29	6·7 · 6·0 7·3 t. · t.
1740 June 28 Sat. 1740 Dec. 21 Sun. 1742 May 8 Sat. 1742 Nov. 1 Mon. 1743 Apr. 27 Wed.	Ashâdha 1663 Pausha 1663 Vaiśâkha 1665 Kârttika 1665 Vaiśâkha 1666	8 17 22 50 14 0 11 6 14 31	6 30 21 30 13 8 9 47 12 41	7 36 — — — 13 42	8 58 . — . — . 15 20	10 4 24 10 14 52 12 25 16 21	t. 6·8 2.6 6.7 t.
1743 Oet. 22 Sat. 1744 Apr. 15 Snn. 1744 Oet. 10 Wed. 1746 Feb. 24 Mon. 1746 Aug. 19 Tues.	Kârttika. 1666 Vaiśākha 1667 Āśvina 1667 Phâlguna 1668 Bhâdrapada 1669	1, 54 19 32 11 31 14 57 22 50	0 2 18 4 10 11 13 26 21 34	1 3 - - -	2 45 	3: 46 21 0 12 51 16 28 24 6	t. 8 · 6 6 · 8 9 · 2 · 6 · 1
1747 Feb. 14 Sat. 1747 Aug. 9 Sun. 1748 Feb. 3 Wed. 1748 July 28 Thur. 1749 June 19 Mon.	Phâlguna 1669 Śrâvaṇa 1670 Mâgha 1670 Śrâvaṇa 1671 Âshâḍha 1672	4 21 7 30 11 3 22 25 8 15	2 -30 5 38 10 2 21 12 7 49	3 31 6 39 — —	5 11 8 21 — — —	6 12 9 22 12 4 23 38 8 41	t. t. 3·6 5·4 0·6

4 D	Hindu Month	Time		from Laul en as 6 A		unrise,	Number of
A. D. Year, Month,	nnd	Greatest plinse.	Begin-		od of curation.	End	twelfths celipsed.
and Day.	Current Śaka Year.	[i.e.mo- ment of fullmoon]	ning of Eclipse.	Begin-	End.	of Eclipse.	["t."=total
	["w.m.i." = with mean intercalations.]	h. m.	h. 111.	h. m.	h. m.	lı m.	eclipse.]
1	2	3	1	5	8	7	8
1749 Dec. 12 Tues. 1750 June 8 Fri. 1750 Dec. 2 Suu. 1751 May 28 Tues. 1751 Nov. 21 Thur.	Mårgasirsha 1672 Jyeshtha 1673 Mårgasirsha 1673 Jyeshtha 1674 Mårgasirsha 1674	19 6 20 5 5 24 21 46 20 20	17 55 18 17 3 32 23 10 18 58	10 23 4 33 —	20 47 6 15	20 17 21 53 7 16 26 22 22 0	5·1 t. t. 10·9 9·2
,	NEW ST	r L ii.			•		
1753 Apr. 17 Tues. 1753 Oct. 12 Fri. 1754 Apr. 7 Snn. 1754 Oct. 1 Tues. 1755 Mar. 27 Thur.	Chaitra 1676 Áśviua 1676 Chaitra 1677 Áśvina 1677 Chaitra 1678	17 85 7 52 7 12 9 1 23 40	16 25 6 40 5 20 7 9 22 16	6 20 8 10	8 4 9 52	18 51 9 4 9 4 10 53 25 4	5·5 5·2 t. t. 7·6
1755 Sept. 20 Sat. 1757 Feb. 4 Fri. 1757 July 30 Sat. 1758 Jan. 24 Tues. 1758 July 20 Thur.	Bhhdrapada 1678 Mhgha 1679 Śrhynya 1650 Pausha 1680 Åshèḍha 1681	9 37 6 17 22 43 5 36 15 38	8 15 4 57 21 5 8 44 13 45	- 4 41 11 52	6 25 16 24	10 59 7 37 21 21 7 28 17 25	7·2 6·9 11·7 t.
1759 Jan. 13 Sat. 1760 May 29 Thur. 1760 Nov. 22 Sat. 1761 May 18 Mon. 1761 Nov. 12 Thur.	Pausha 1681 Jyeshtha 1683 Karttika 1658 Vaišākha 1683 Karttika 1684	7 10 20 36 19 36 21 15 10 18	5 50 20 5 18 29 19 25 8 26	20 29 9 27	22 1 11 9	8 30 21 7 21 3 23 5 12 10	6·9 0·9 6·3 t. t.
1762 Mny 8 Sat. 1762 Nov. 1 Mon. 1764 Mar. 17 Sat. 1764 Sept. 10 Mon. 1765 Mar. 7 Thur.	Valšákha 1655 Kárttika 1695 Phálgana 1686 Bhádrapada 1687 Phálgana 1687	2 49 19 25 23 18 6 3 12 36	1 15 18 3 21 50 4 53 10 41		13 27	4 23 20 47 21 46 7 13 14 28	10·3 7·2 8·4 4·9 t.
1765 Ang. 30 Fri. 1766 Feb. 24 Mon. 1766 Aug. 20 Wed. 1768 Jan. 4 Mon. 1768 June 30 Thur.	Bhûdrapada 1658 Phôlgana 1658 Srávaņa 1659 Pausha 1690 Âshâḍha 1691	15 2 18 58 6 4 3 33 2 56	13 10 17 51 4 41 2 23 1 11	14 10 — — — 2 21	15 54 — — 3 31	16 54 20 2 7 24 4 43 4 41	t. 4·0 6·8 4·9 t.
1768 Dec. 23 Fri. 1769 June 19 Mon. 1769 Dec. 13 Wed. 1771 Apr. 29 Mon. 1771 Oct. 23 Wed.	Mûrgaśirsha 1691 Jycshtha 1692 Mûrgaśirsha 1692 Vniśūkha 1693 Áśvina 1693	14 11 7 16 5 17 1 8 15 33	12 19 5 35 3 46 0 1 14 26	13 20 6 57 — —	15 ° 35 ° - ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °	16 3 8 57 6 48 2 15 16 40	t. t. 9.3 4·4 4·4
1772 Apr, 17 Fri. 1772 Oct. 11 Sun. 1773 Apr. 7 Wcd. 1773 Scpt. 30 Thur. 1775 Feb. 15 Wed.	Chaitra 1695 Âśvina 1695 Chaitra 1696 Âśvina 1696 Mâgha 1697	15 9 16 16 7 46 16 55 14 11	13 17 14 25 6 18 15 27 12 52	14 18 15 26 — — —	16 0 17 6 —	17 1 18 7 9 14 18 23 15 30	t. \$.4 8.4 6.6
1776 Aug. 11 Fri. 1776 Feb. 4 Sun. 1776 July 30 Tucs. 1777 Jan. 23 Thur. 1777 July 20 Sun.	Śrâvaņa 1698 Migha 1608 Śrâvaņa 1699 Pausha 1699 Âshâḍha 1700	6 20 13 32 23 6 15 28 11 55	4 47 11 40 21 16 14 6 11 16	12 40 22 17	14 23 23 55 —	7 53 15 24 24 56 16 50 12 34	10·0 t. t. 7·2 1·4
1778 Dec. 4 Fri. 1779 May 30 Sun. 1779 Nov. 23 Tucs, 1780 May 18 Thur. 1780 Nov. 12 Sun.	Mûrgaśirsha 1701 Jyeshtha 1702 Kûrttika 1702 Vaiśâkha 1703 Kûrttika 1703	4 32 3 55 18 51 10 1 3 23	3 15 2 8 16 59 8 23 1 59	3 15 18 0 — —	4 35 19 42 —	5 49 5 42 20 43 11 39 4 47	6.2 t. t. 11.8 7.6

*	Hindu Mouth	Time	measured take	from Lail		unrise,	Number of
A. D. Year, Month,	anil	Greatest phase.	Begin-		od of curation.	End	twelfths
and Day.	Current Śaka Year.	[i.e. mo- ment of full moon]	ning of Eclipse.	Begin- ning.	End.	of Eclipse.	eclipsed. ["t."=total
	["w.m.i." = with mean intercalations.]	lı. m.	h. m.	lı. m.	h. m.	b. m.	cclipse.]
11	2	3	4	5	в	7	8
1782 Mar. 29 Fri. 1782 Sept. 21 Sat. 1783 Mar. 18 Tues. 1783 Sept. 10 Wed. 1784 Mar. 7 Sun.	Chaitea 1705 Bhádrapada 1705 Phálguna 1705 Bhádrapada 1706 Phálguna 1706	7 31 13 20 20 37 22 38 2 42	6 6 12 18 18 45 20 46 1 32	19 45 21 47	21 29 23 29 —	8 56 14 22 22 29 24 30 3 52	7·8 3·7 t. t. 4·8
1784 Aug. 30 Mon. 1786 Jan. 14 Sat. 1786 July 11 Tucs. 1787 Jan. 3 Wed. 1787 June 30 Sat.	Bhidrapada 1707 Pansha 1708 Áshādha 1709 Pansha 1709 Áshādha 1710	13 48 12 0 9 49 22 59 13 43	12 22 10 50 8 8 21 7 11 58	9 29 22 8 13 9	10 9 23 50 14 17	15 14 13 10 11 30 24 51 15 28	8·0 4·8 t. t.
1787 Dec. 24 Mon. 1789 May 9 Sat. 1789 Nov. 2 Mon. 1790 Apr. 28 Wed. 1790 Oct. 22 Fri.	Mûrgasîrsha 1710 Vnîsâkha 1712 Kûrttîka 1712 Vnîsâkha 1713 Asvina 1713	14 S 8 32 23 20 23 1 23 44	12 37 7 34 22 18 21 10 21 54	22 11 22 55	23 51 24 33	15 39 9 30 24 22 24 52 25 34	9·4 3·2 3·8 t.
1791 Apr. 18 Mon. 1791 Oct. 11 Tucs. 1793 Feb. 25 Mon. 1793 Aug. 21 Wed. 1794 Feb. 14 Fri.	Chaitra 1714 A świna 1714 Phálguna 1715 Śráwana 1716 Mūgha 1716	15 45 24 27 22 4 11 2 21 26	14 14 22 56 20 49 12 33 19 34	20 35	22 17	17 16 25 58 23 19 15 31 23 18	0·5 9·8 5·9 8·8 t.
1794 Aug. 11 Mon. 1795 Feb. 3 Tucs. 1795 July 31 Fri. 1796 Dec. 14 Wed. 1797 June 9 Fri.	Śrâvana 1717 Mûgha 1717 Śrâvana 1718 Mûrgasireha 1719 Jyeshtha 1720	6 33 23 44 18 56 13 22 10 35	4 41 22 21 17 58 12 6 8 51	5 42 — — 10 4	7 24 - - 11 6	8 25 25 7 19 54 14 38 12 19	t. 7·5 3·9 6·1 t.
1797 Dec. 4 Mon. 1798 May 29 Tacs. 1798 Nov. 23 Fri. 1800 Apr. 9 Wed. 1800 Oct. 2 Thur.	Mårgasirsha 1720 Jyeshtha 1721 Kärttika 1721 Chaitra 1723 Äsvina 1723	3 23 17 12 11 30 15 31 20 47	1 32 15 30 10 5 14 11 19 53	2 83 16 48 — —	4 13 17 36 —	5 14 18 54 12 55 16 54 21 41	t. t. 7·9 6·9 2·8
1801 Mar. 30 Mou. 1801 Sept. 22 Tues. 1802 Mar. 19 Fri. 1802 Sept. 11 Sat. 1804 Jan. 26 Thur.	Chaitra 1724 Bhâdrapada 1724 Phôlguna 1721 Bhâdrapada 1725 Migha 1726	4 29 6 21 10 21 21 39 20 23	2 37 4 30 9 8 20 8 19 14	3 37 5 31 — —	5 21 7 11 — —	6 21 8 12 11 34 23 10 21 32	t. t. 5·4 9·4 4·7
1804 July 22 Sun. 1805 Jan. 15 Tues. 1805 July 11 Thur. 1806 Jan. 4 Sat. 1807 May 21 Thur.	Âshādha 1727 Pausha 1727 Âshādha 1728 Pausha 1728 Vaišākha 1730	16 42 7 41 20 8 23 5 15 53	15 6 5 52 18 20 21 34 15 9	6 53 19 25 —	8 35 20 51 —	18 18 9 36 21 56 24 36 16 37	10.9 t. t. 9.4 1.8
1807 Nov. 15 Snn. 1808 May 10 Tues. 1808 Nov. 3 Thur. 1809 Apr. 29 Sat. 1809 Oct. 23 Mon.	Khrttika 1730 Vaisakha 1731 Khrttika 1731 Vaisakha 1732 Asvina 1732	7 13 6 41 7 18 23 36 8 8	6 15 4 51 5 28 22 1 6 34	5 52 6 80 —	7 30 8 6 —	8 11 8 31 9 8 25 11 9 42	3·2 t. t. 10·6 10·2
1811 Mar. 10 Sun. 1811 Sept. 2 Mon. 1812 Feb. 27 Thur. 1812 Aug. 22 Sat. 1813 Feb. 15 Mon.	Phûlgana 1733 Bhûdrapada 1734 Phûlgana 1734 Srîvana 1735 Mûgha 1735	5 43 21 48 5 0 14 5 7 54	4 31 20 25 3 17 12 13 6 28	- 4 18 13 13	- 6 0 14 57 -	6 55 23 11 7 1 15 57 9 20	5·3 7·4 t. t. 8·0

1.70	. Hindu Mouth	Time	measured tak	from Laul en as 6 A		unrisc,	Number of
A. D. Year, Month,	and	Greatest phase.	Begin-		od of euration.	End	twelfths celipsed.
and Day.	Current Śaka Year. ["w.m.i." = with mean intercalations.]	[i.c.mo- ment of fullmoon]	ning of Eclipse.	Begin- ning.	End.	of Eclipse.	["t."=total
1	2	h. m.	h. m.	lı. m.	h. m.	1ı. m.	eclipse.]
1818 Aug. 12 Thur.	Śrāvaņa 1786	1 55	0 48			3 2	4.5
1814 Dec. 26 Mon. 1815 June 21 Wed. 1815 Dec. 16 Sat. 1816 June 9 Sun.	Mûrgaśirsha 1737 Jyeshtha 1738 Mûrgaśirsha 1739 Jyeshtha 1739	22 13 17 11 12 1 24 20	20 57 15 31 10 10 22 31	16 57 11 11 23 44	17 25 12 51 24 56	23 29 18 51 13 52 26 6	6·0 t. t. t.
1816 Dcc. 4 Wed. 1818 Apr. 20 Mon. 1818 Oct. 14 Wed. 1819 Apr. 10 Sat. 1819 Oct. 3 Sun.	Mârgaśîrsha 1739 Chaitra 1741 Âśvina 1741 Chaitra 1742 Âśvina 1742	19 38 23 28 4 26 12 12 14 15	18 11 22 14 3 42 10 20 12 25	- - 11 21 13 26	$\frac{-}{-}$ 13 3 15 4	21 5 24 42 5 10 14 4 16 5	8·2 5·6 1·8 t.
1820 Mar. 29 Wed, 1820 Sept. 22 Fri. 1822 Feb. 6 Wed, 1822 Aug. 2 Fri. 1823 Jan. 26 Suu.	Chaitea 1743 Bhàdrapada 1743 Màgha 1744 Śrāvaṇa 1745 Màgha 1745	17 47 5 37 4 45 23 31 16 28	16 29 4 3 3 37 22 1 14 36			19 5 7 11 5 53 25 1 18 20	6·4 10·3 4·6 9·1 t.
1823 July 23 Wed, 1824 Jan. 16 Fri. 1824 July 11 Sau. 1825 May 31 Tucs. 1825 Nov. 25 Fri.	Âshâḍha 1746 Pausha 1746 Âshâḍha 1747 Jycshtha 1748 Kârttika 1748	2 35 7 56 3 19 23 12 15 11	0 45 6 24 2 34 22 54 14 17	1 48 — — —	3 22 — — —	4 25 9 28 4 4 23 30 16 5	t. 9.6 1·9 0.3 2·8
1826 May 21 Sun. 1826 Nov. 14 Tucs. 1827 May 11 Fri. 1827 Nov. 3 Sat. 1829 Mar. 20 Fri.	Vaišākha 1749 Kārttika 1749 Vaišākha 1750 Kārttika 1750 Phālguna 1751	14 19 15 0 7 19 15 57 13 8	12 29 13 10 5 40 14 22 12 1	13 33 14 14 7 12 —	15 5 15 46 7 26 —	16 9 16 50 8 58 17 32 14 15	t. t. t. 10 • 6 4 • 4
1829 Sept. 13 Sun. 1830 Mar. 9 Tucs. 1830 Sept. 2 Thur. 1831 Feb. 26 Sat. 1831 Aug. 23 Tucs.	Bhâdrapada 1752 Phâlgana 1752 Bhâdrapada 1753 Phâlguna 1753 Śrâvaṇa 1754	5 38 12 46 21 39 16 0 9 0	4 21 10 55 19 47 14 33 7 45	11 56 20 47 —	13 36 22 31 —	6 55 14 37 23 31 17 27 10 15	6·3 t. t. 8·3 5·9
1833 Jan. 6 San. 1833 July 1 Mon. 1833 Dec. 26 Thur. 1834 June 21 Sat. 1834 Dec. 16 Tues.	Pausha 1755 Âshâḍha 1756 Mûrgasîrsha 1756 Jyeshṭha 1757 Mûrgasîrsha 1757	7 3 23 46 20 35 · 7 21 3 50	5 48 22 12 18 44 5 35 2 23	19 45 6 41	21 25 8 7	S 18 25 20 22 26 9 13 5 17	5.8 10.5 (. t. 8·2
1835 June 10 Wed. 1836 May 1 Sun. 1836 Oct. 24 Mon. 1837 Apr. 20 Thur. 1837 Oct. 13 Fri.	Jyeshtha 1758 Vaiśākha 1759 Âśvina 1759 Chaitra 1760 Âśvina 1760	21 38 7 12 12 18 19 45 22 20	21 3 6 5 11 39 17 54 20 30	 18 55 21 32	20 35 23 8	22 13 8 19 12 57 21 36 24 10	1·1 . 4·5 1·4 . t. t.
1838 Apr. 9 Mon. 1838 Oct. 3 Wed. 1840 Feb. 17 Mon. 1840 Aug. 13 Thur. 1841 Feb. 5 Fri.	Chaitra 1761 Âśvina 1761 Mågha 1762 Śrâvaņa 1763 Mågha 1763	25 1 13 43 13 6 6 22 25 11	23 38 12 6 11 59 4 59 23 19			26 24 15 20 14 13 7 45 27 3	7·5 11·4 4·5 7·4 t.
1841 Aug. 2 Mon. 1842 Jan. 26 Wed. 1842 July 22 Fri. 1843 Dec. 6 Wed. 1844 May 31 Fri.	Śrâvana 1764 Pausha 1764 Âshâḍha 1765 Mârgaśirsha 1766 Jyeshṭha 1767	9 2 16 46 9 51 23 14 21 52	7 11 15 14 8 50 22 23 20 5	8 12 — — 21 11	9 52 — — 22 33	10 53 18 18 10 52 24 5 23 39	t. 9·6 3·6 2.5 t.

	Hindu Month	Tim	e ;	measured tak	from Land en as 6 A	ka mean s	unrise,	Number of
A. D. Year, Month,	and	Greates	- 1	Begin-		od of	End	twelfths
and Day.	Current Śaka Year.	[i.e. mo ment o	f	ning of Eclipse.	Begin-	End.	of Eclipse.	cclipsed.
and Day.	["w.m.i." = with mean intercalations.]	fullmoon		h. m.	h. m.	h. m.	h. m.	["t." = total eclipse.]
1	2	3		4	5	в	7	8
1844 Nov. 24 Sun. 1845 May 21 Wed. 1845 Nov. 13 Thur. 1847 Mar. 31 Wed. 1847 Sept. 24 Fri.	Kârttîka. 1767 Vaiśâkha 1768 Kârttika. 1768 Chaitra. 1770 Bhâdrapada 1770	22 49 14 58 23 51 20 29 13 36	3	21 0 13 15 22 14 19 29 12 24	22 4 14 33 —	23 34 15 23 — —	24 38 16 41 25 28 21 29 14 48	t. t. 11·2 3·5 5·2
1848 Mar. 19 San. 1848 Sept. 13 Wed. 1849 Mar. 8 Thur. 1849 Sept. 2 Sun. 1851 Jan. 17 Fri.	Phâlgnna 1770 Bhâdrapada 1771 Phâlguna 1771 Bhâdrapada 1772 Pausha 1773	20 15 5 25 23 59 16 15 15 55		18 25 3 33 22 29 14 53 14 41	19 26 4 34 — —	21 4 6 16 — —	22 5 7 17 25 29 17 37 17 9	t. t. 9·1 7·2 5·7
1851 July 13 Sun. 1852 Jan. 7 Wed. 1852 July 1 Thur. 1852 Dec. 26 Sun. 1853 June 21 Tues.	Âshâdha 1774 Pausha 1774 Âshâdha 1775 Mûrgasîrsha 1775 Jyeshtha 1776	6 24 5 16 14 29 12 5 5 5		4 55 3 25 12 39 10 38 4 12	4 26 13 41 —	6 6 15 17	7 53 7 7 16 19 13 32 5 58	8·7 t. t. 8·3 2·7
1854 May 12 Fri. 1654 Nov. 4 Sat. 1855 May 2 Wed. 1855 Oct. 25 Thur. 1856 Apr. 20 Sun.	Vaiśākha 1777 Kūrttika 1777 Vaišākha 1778 Āśvina 1778 Chaitra 1779	14 52 20 16 3 9 6 34 8 11		13 54 19 46 1 19 4 44 6 42	2 20 5 48	3 58 7 20	15 50 20 46 4 59 8 24 9 40	3·2 0·8 t. t. 8·7
1856 Oct. 13 Mon. 1858 Feb. 27 Sat. 1858 Aug. 24 Tues. 1859 Feb. 17 Thur. 1859 Aug. 13 Sat.	Âśvina 1779 Phâlguna 1780 Śrâvaṇa 1781 Mâgha 1781 Śrâvaṇa 1782	21 57 21 19 13 22 9 48 15 35		20 18 20 14 12 7 7 57 13 43	21 50 8 58 14 43	22 4 — 10 38 16 27	23 36 22 24 14 37 11 39 17 27	t. 4·2 5·8 t. t.
1860 Feb. 6 Mon. 1860 Aug. 1 Wed. 1861 Dec. 17 Tues. 1862 June 12 Thur. 1862 Dec. 6 Sat.	Mûgha 1782 Śrâvaṇa 1783 Mûrgaśîrsha 1784 Jyeshṭha 1784 Mûrgaśîrsha 1785	25 31 16 27 7 17 5 22 6 43		23 59 15 13 6 29 3 38 4 54	- 4 50 5 59	 5 54 7 27	27 3 17 41 8 5 7 6 8 32	9·7 5·6 2·2 t.
1863 June 1 Mon. 1863 Nov. 25 Wed. 1865 Apr. 11 Tucs. 1865 Oct. 4 Wel. 1866 Mar. 31 Sat.	Jyeshtha 1786 Kârttika 1786 Chaitra 1788 Âśvina 1788 Chaitra 1789	22 27 8 0 3 39 21 45 3 36		20 42 6 22 2 48 20 40 1 46	21 52 — — 2 48	23 2 — — 4 24	24 12 9 38 4 30 22 50 5 26	t. 11·6 2·5 4·2 t.
1866 Sept. 24 Mon. 1867 Mar. 20 Wed. 1867 Sept. 13 Fri. 1869 Jan. 27 Wed. 1869 July 23 Fri.	Bhâdrapada 1789 Phâlguna 1789 Bhâdrapada 1790 Mâgha 1791 Âshâdha 1792	13 10 7 52 23 29 24 44 13 7		11 20 6 20 22 1 23 30 11 47	12 21 — — — — —	13 59 — — — —	15 0 9 24 24 57 25 58 14 27	t. 9·8 8·4 5·6 6·8
1870 Jan. 17 Mon. -1870 July 12 Tucs. 1871 Jan. 6 Fri. 1871 July 2 Sun. 1872 May 22 Wed.	Pausha 1792 Âshâḍha 1793 Pausha 1793 Âshâḍha 1794 Vaiśâkha 1795	13 50 21 37 20 19 12 27 22 23		11 59 19 46 18 51 11 22 21 41	13 0 20 47 — — —	14 40 22 27 — — —	15 41 23 28 21 47 13 32 23 5	t. t. 8·5 4·2 1·6
1872 Nov. 15 Fri, 1873 May 12 Mon. 1873 Nov. 4 Tnes. 1874 May 1 Fri. 1874 Oct. 25 Sun.	Kûrttika. 1795 Vaiśâkha 1796 Kûrttika. 1796 Vaiśûkha 1797 Áśvina 1797	4 24 10 23 14 55 15 8 6 15		4 3 8 34 13 6 13 35 4 33	$egin{array}{cccc} & & & & \\ 9 & 38 & & & \\ 14 & 10 & & & \\ & & & & \\ 5 & 54 & & & \\ \end{array}$	11 8 15 40 6 36	4 45 12 12 16 44 16 41 7 57	0·4 t. t. 10·0 t.

TABLE E.

	llindu Month	Time	measured tak	from Lan en as 6 A	ka mean s . M.	unrisc,	Number of
. A. D. Year, Month,	and	Greatest phase.	Begin-		od of curation.	End	twelfths eclipsed.
and Day.	Current Śaka Year.	[i.e. mo- ment of full moon]	ning of Eelipse.	Begin- ning.	End.	of Eclipse.	["t."=total
	["w.m.i." = with mean intercalations.]	h. m.	h. m.	h. m.	lı. m.	h. in.	eclipse.]
1 .	2	3	4	5	8	7	8
1876 Mar. 10 Fri. 1876 Sept. 3 Snn. 1877 Feb. 27 Thes. 1877 Aug. 23 Thur. 1878 Feb. 17 Snn.	Phûlgnun 1798 Bhûdrapada 1790 Phûlgnua 1799 Śrâvnua 1800 Mûgha 1800	5 24 20 26 18 22 22 13 10 12	1 22 19 22 16 31 20 22 8 38	17 32 21 23	19 12 23 3	6, 26 -21 30 20 13 24 4 11 46	3·8 4·0 t. t. 10·3
1878 Aug. 12 Mon. 1879 Dec. 28 Sun. 1880 June 22 Tues. 1880 Dec. 16 Thur. 1881 June 12 Sun.	Śrâvaṇa 1801 Mûrgaśirsha 1802 Jyeshṭha 1803 Mûrgaśirsha 1803 Jyeshṭha 1804	23 10 15 25 12 52 14 42 5 57	21 47 14 40 11 10 12 54 4 9	12 31 13 59 5 15	13 13 15 25 6 39	24 33 16 10 14 34 16 30 7 45	7·4 1·9 t, t.
1881 Dec, 5 Mon. 1883 Apr. 22 Sun. 1883 Oct. 16 Toes. 1884 Apr. 10 Wed. 1884 Oct. 4 Sat.	Mårgaširsha 1804 Chaitra 1806 Ásvina 1806 Chaitra 1807 Ásvina 1807	16 12 10 40 5 57 10 50 21 6	14 83 10 5 4 59 9 1 19 16	16 12 — 10 5 20 18	16 12 — — 11 35 21 54	17 51 11 15 6 55 12 39 22 56	t. 1·1 3·3 t. t.
1885 Mar. 30 Mon. 1885 Sept. 24 Thur. 1887 Feb. 8 Tucs. 1887 Aug. 3 Wed. 1888 Jan. 28 Sat.	Chaitra 1808 Bhâdrapada 1808 Mûgha 1809 Śrâvaṇa 1810 Mûgha 1810	15 39 6 52 9 25 19 50 22 21	14 3 5 20 8 13 18 39 20 30			17 15 8 24 10 37 21 1 24 12	11:0 9:6 5:3 5:1 t.
1888 July 23 Mon. 1889 Jan. 17 Thur. 1889 July 12 Fri. 1890 June 3 Thes. 1890 Nov. 26 Wed.	Âshûdha 1811 Pansha 1811 Âshûdha 1812 Jyeshtha 1813 Kûrttika 1813	4 49 4 33 19 55 5 49 12 36	2 57 3 5 18 40 5 38 12 25	3 57 — — —	5 41 _ _ _	$\begin{bmatrix} 6 & 41 \\ 6 & 1 \\ 21 & 10 \\ 6 & 0 \\ 12 & 47 \end{bmatrix}$	t. 8·4 5·9 0·1 0·1
1891 May 23 Sat. 1891 Nov. 15 San. 1892 May 11 Wed. 1892 Nov. 4 Fri. 1894 Mar. 21 Wed.	Valsûkhn. 1814 Kûrttika. 1814 Valsûkha. 1815 Kûrttika. 1815 Phûlguna. 1816	17 29 23 21 21 56 14 46 13 24	15 42 21 32 20 18 13 4 12 27	16 50 22 38 — 14 22 —	18 S 24 4 — 15 10	19 16 25 10 23 34 16 28 14 21	t. t. 11·6 t. 3·1
1894 Sept. 15 Sat. 1895 Mar. 11 Mon. 1895 Sept. 4 Wed. 1896 Feb. 28 Fri. 1896 Aug. 23 Sun.	Bhâdrapada 1817 Phâlguna 1817 Bhâdrapada 1818 Phâlguna 1818 Śrâvaṇa 1819	3 30 2 45 4 59 18 48 6 0	$\begin{array}{cccc} 2 & 36 \\ 0 & 54 \\ 3 & 9 \\ 17 & 13 \\ 4 & 30 \end{array}$	1 55 4 11 —	3 35 5 47 —	4 21 4 36 6 49 20 23 7 30	2·8 t. t. 10·7 9·0
1898 Jan. 7 Fri. 1898 July 3 Snn. 1898 Dec. 27 Tucs. 1899 Dec. 16 Sat.	Pausha 1820 Âshûdha 1821 Mûrgaśirsha 1821 Jyeshtha 1822 Mûrgaśirsha 1822	23 33 20 20 22 41 13 20 24 28	22 49 18 43 20 53 11 30 22 48	21 59 12 33 24 18	23 23 14 7 24 38	24 17 21 57 24 29 15 10 26 8	1·8 11·2 t, t. t.
1900 June 13 Wed.	Jyeshthn 1823	2 27	2 12		_	2 42	0.2

TABLE F.

MEAN TO APPARENT TIME CORRECTION-TABLE.

OLD STYLE.												
Day.	A. D. 200	A. D. 400	A: D. 600	A. D. 800	A. D. 1000	A. D. 1200	A. D. 1400	A. D. 1600	A. D. 1700 to Sept. 2nd. 1752	NEW STYLE. Since Sept. 14 A. D. 1752		
January -1	in. — 12	m. — 11	m. — 10	m. — 10	m. 9	. m. — 9	. m.	m. — 9	m. — 8	m. . — 4		
,, 6	<u>- 14</u>	— 13	—·13	- 12	- 11	-11	— 11	- 11	- 10	— 6		
" 11 " 16	-16 -18	-15 -16	-15 -16	-14 -16	$-13 \\ -15$	— 13 · — 14	-13 -14	-12 -13	-12 -13	- 8. - 10		
" 21	— 10 — ·19	— 18 — 18	-10 -17	-10 -17	— 16	— ·15	— 13 — 15	— 14	— 14 — 14	— 10. — 12.		
,, 26	—·19	19	18	18	17	 ·16	15	— 14	— 14	. — 13		
,, 31	— 20	19	<u> </u>	18	· — 17	— 16	- 16	15	- 14	- 14		
February 5	20	— 19	— 18	- 17	- 16	16	<u> </u>	— 15	— 14	14		
" 10	_ 19	— ·18	18	17	— ·16	— 16	 ·15	- 14	- 13	· — 14		
" lõ	18	17	17	- 16	15	15	14	— 13	- 13	. — 14		
,, 20	- 17	— ·16	- 16	15	15	14	13	·13	- 12	. — 14		
,, 25	— 16	<u> </u>	 ·14	14	—·13	— 12	— 12	- 12	- 1.1	— 13		
March 2	- 14	- 13	— ·13	<u> ·12</u>	<u>— 12</u>	11	11	— 10	- 10	— 13		
" 7	12	·11	·11	10		— ∙ 9	- 9	 8	- 8	— 11		
,, 12	- 9	9	- 9	— 9	8	<u></u> · 8	- 7	- 7	- 7	10		
., 17	- 7	7	- 7	- 7	_ 6	<u> </u>	5	5	- 5	— 8		
,, 22	— 5	 ∴,5	— 5	- 5	- 5	- 4	— 4 — 2	-4 -2	— 4 — 2	- 7 - 5		
" 27	_ 3	3	3	— .3	—·. 3	- 3	_ 2	_ 2		— U.		
April 1	0	_ 1	_ 1	- 1	1	- 1	- 1	<u> </u>	0	4		
,, 6	+ 2	+1	+ 1	+ 1	+ 1	0	_0	+ 1	+ 1	- 2		
, 11	+ 4	+ .3	+ 3	+ 2	+ 2	+ 2	+ 2	$\begin{array}{cccc} + & 2 \\ + & 3 \end{array}$	$\begin{array}{c c} + 1 \\ + 2 \end{array}$	- 1 0		
, 16 , 21	+ 6	+ 5 + 6	+ 5	+ 4.	+ 3	+ .3 + .4	$\begin{vmatrix} + & 3 \\ + & 4 \end{vmatrix}$	$\begin{array}{c c} + & 3 \\ + & 4 \end{array}$	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	+ 1		
ge .	+ .7	$\begin{vmatrix} + 6 \\ + 7 \end{vmatrix}$	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	+ 5 + 6	+ 4 + 5	+ 4	+.4	+ 4	+ 4	+ 2		
,, 20	'	· ·						ı				
May 1	+ 10	+ .8	+ 8	+ .7	+ .6	+ 5	+ 5	+ 4 $+$ 4	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	+ 3		
" 6 " 11	+ 10	+ 9	3	+ .7	1 '	+ 5 + 5		+ 4 + 4	$\begin{vmatrix} + & 4 \\ + & 4 \end{vmatrix}$	+ 4		
,, 16	+10 + 9	+ .9 + .8	+ .8 + .7.	+ ·7 + 7	+6	+ 5 + 5	$\begin{array}{c c} + 5 \\ + 4 \end{array}$	+ 3	+3	- -		
,, 21	+ 9	+ 8	+ 7	+ 6	+ 6	+ 5	+ 4	+ 3	+ 3	+ 3		
,, 26	+ .8	+ .7	+ 6	+ 6	+ 5	+ 4	+ 3	+ 2	+ 2	+ 3		
" 31	+ 7	+ 6	+ .6	+ 5	+ 4	+ 3	+ 2	+ 1	+ 1	+ 3		
June 5	+ 6	- 5	+ 5	+ 4	+ 3	+ 2	+ 1	0	. 0	+ 2		
,, 10	+ 4	+ 4	+ 3	+ 2	+ 2	+ 1	0	_ 1	- 1	+ 1		
,, 15	+ 2	+ 2	+ 1	+ 1	0	0	- 1	_ 2	_ 2	0		
., 20	1 - 0	0	. 0	. 0	- 1	_ 1	_ 2	_ 3	- 3	. — 1.		
" 25	_ 2	_ 2	_ 2	- 2	_ 2	_ 2	— 3	- 3	- 3	_ 2		
,, 30	- 3	. — 3	- 3	— 3	_ 3	— 3	— 4	<u> </u>	4	<u> </u>		
		<u> </u>	-					+ 조류 -				

THE INDIAN CALENDAR.

TABLE F.

MEAN TO APPARENT TIME CORRECTION-TABLE.

OLD STYLE. NEW STYLE.													
Day.	A. D. 200	A. D. 400	A. D. 600	A. D. 800	A. D. 1000	Λ. D. 1200	A. D. 1400	A. D. 1600	A. D. 1700 to Sept. 2nd. 1752	Since Sept 14			
July 5	m 5 - 6 - 7 - 8 - 8 - 8	m. - 5 - 6 - 7 - 7 - 7	m 5 - 6 - 6 - 7 - 7 - 7	m. 4 5 6 6 6	m. - 4 - 5 - 5 - 6 - 6 - 6	m. - 4 - 5 - 5 - 6 - 6 - 5	m. - 4 - 5 - 5 - 6 - 6 - 5	m. 4 5 6 6 5	m. - 4 - 5 - 6 - 6 - 6 - 5	m. — 4 — 5 — 5 — 6 — 6 — 6			
August 4	- 7 - 7 - 6 - 4 - 2	- 6 - 6 - 5 - 4 - 2	- 6 - 5 - 4 - 3 - 1	- 5 - 5 - 4 - 2 - 1 + 1	- 5 - 4 - 3 - 2 0 + 1	- 5 - 4 - 3 - 2 + 2	- 4 - 4 - 3 - 1 + 1 + 2	- 4 - 3 - 2 - 1 + 1 + 2	- 4 - 3 - 2 0 + 1 + 3	6 5 4 3 2 1			
September 3	+ 2 + 4 + 6 + 8 + 10 + 12	+ 2 + 4 + 6 + 8 + 10 + 12	+ 2 + 4 + 6 + 8 + 10 + 12	+ 2 + 4 + 6 + 8 + 10 + 12	+ 3 + 5 + 6 + 8 + 10 + 12	+ 3 + 5 + 7 + 8 + 10 + 12	+ 3 + 5 + 7 + 9 + 11 + 12	$\begin{array}{c} + & 4 \\ + & 6 \\ + & 7 \\ + & 9 \\ + & 11 \\ + & 12 \end{array}$	+ 4 + 6 + 8 + 9 + 11 + 12	0 + 2 + 4 + 6 + 8 + 10			
October 5	+ 14 + 16 + 17 + 18 + 18 + 19	+ 13 + 15 + 17 + 18 + 18 + 18	+ 13 + 15 + 16 + 17 + 17 + 18	+ 13 + 15 + 16 + 16 + 17 + 17	+ 13 + 15 + 16 + 16 + 16 + 17	+ 13 + 15 + 16 + 16 + 16 + 16	+ 13 + 15 + 16 + 16 + 16 + 16	+ 13 + 15 + 16 + 16 + 16 + 16	+ 14 $+ 15$ $+ 16$ $+ 16$ $+ 16$ $+ 16$	+ 11 $+ 19$ $+ 13$ $+ 14$ $+ 15$ $+ 16$			
November 2	+ 19 + 18 + 17 + 15 + 13 + 10	+ 18 + 17 + 16 + 14 + 19 + 9	+ 17 + 16 + 15 + 14 + 12 + 9	+ 17 + 16 + 15 + 13 + 11 + 9	+ 16 + 15 + 14 + 13 + 11 + 9	+ 16 + 15 + 14 + 12 + 10 + 8	+ 15 + 15 + 13 + 12 + 10 + 8	+ 15 + 14 + 13 + 12 + 10 + 8	+ 15 + 14 + 13 + 11 + 9 + 7	+ 16 $+ 16$ $+ 16$ $+ 15$ $+ 13$ $+ 12$			
December 2	$ \begin{array}{r} + 7 \\ + 4 \\ + 1 \\ - 2 \\ - 6 \\ - 9 \\ - 12 \\ - 14 \end{array} $	+ 7 + 4 + 1 - 2 - 5 - 8 - 11 - 13	+ 7 + 4 + 1 - 2 - 5 - 8 - 10 - 12	+ 7 + 4 + 1 - 2 - 5 - 7 - 9 - 12	+ 7 + 4 + 1 - 2 - 5 - 7 - 9 - 11	+ 6 + 4 + 1 - 2 - 5 - 7 - 9 - 11	+ 6 + 3 + 1 - 2 - 5 - 7 - 9 - 11	+ 6 + 3 + 1 - 2 - 5 - 7 - 9 - 11	+ 6 + 3 0 - 2 - 5 - 8 - 9 - 10	+ 10 + 8 + 6 + 3 + 1 - 1 - 3 - 6			

TABLE G.

APPARENT TIME OF THE SUN'S RISING AND SETTING.

N.B. On and after each date entered herein use the column to which it refers. The arrows indicate the order.

N.B. On and a	ster eaci	each date entered herein use the column to which it refers. The arrows indicate the order.													
					N	ORTE	DEC	CLIN	ATIO	N.					
, , , ,	0	•	. 2	•	. 40	•	69	•	. 8	0	99	•	10)0	
Latitude. ↓	Mar. 17		Mar. 23	3 23 → Sept.15	Mar. 28	>>> Sept. 10	Apr. 1	»→ Sept. 5	Apr. 8	≫→ Scpt. 1	Apr. 12	2 »>->- Aug. 29	Apr. 14 ← # /	. ≫-> Aug. 26	*
	riscs	scts	riscs	sets	riscs	sets	riscs	sets	riscs	sets	rises	sets	rises	sets	
·	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	lı. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	
0°	6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0	7
20	6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0	5 59	6 1	5 59	6 1	5 59	6 1	
4°	6 0	6 0	6 0	6 0	5 50	6 1	5 59	6 1	5 58	6 2	5 58	6 2	5 57	6 3	
6°:	6 0	6 0	6 0	6 0	5 58	6 2	5 58	6 2	5 57	6 3	5 57	6 3	5 56	6 4	1
8°	6 0	6 0	5 59	6 1	5 58	6 2	5. 24	6 3	5 56	6 4	5 55	6 5	5 55	6 5	
10°	6 0	6 0	5 59	6 1	5 57	6 3	5 56	6 4	5 5 4	6 6	5 54	6 6	5 53	6 7	
12°	6 0	6 0	5 58	6 2	5 57	6 3	5 55	6 5	5 53	6 7	5 53	6 7	5 52	6 8	
140	6 0	6 0	5 58	6 2	5 56	6 4	5 54	6 6	5 52	6 8	5 51	6 9	5 51	6 9	
16°	6 0	6 0	5 58	6 2	5 55	6 5	5 53	6 7	5 51	6 9	5 50	6 10	5 48	6 12	
18°	6 0	6 0	5 58	6 2	5 55	6 5	5 52	6 8	5 50	6 10	5 48	6 12	5 47	6 13	
200	6 0	6 0	5 57	6 3	5 54	6 6	5 51	6 9	5 48	6 12	5 47	6 13	5 45	6 15	
210	6 0	6 0	5 57	6.3	5 54	6 6	5 51	6 9	5 48	6 12	5 46	6 14	5 44	6 16	
220	6 0	6 0	5 57	6 3	5 54	6 6	5 50	6 10	5 47	6 13	5 45	6 15	5 44	6 16	
230	6 0	6 0	5 57	6 3	5 53	6 7	5 50	6 10	5 46	6 14	5 45	6 15	5 43	6 17	Ì
240	6 0	6 0	5 57	6 3	5 53	6 7	5 49	6 11	5 46	6 14	5 44	6 16	5 42	6 18	
250	6 0	6 0	5 56	6 4	5 53	6 7	5 49	6 11	5 45	6 15	5 43	6 17	5 41	6 19	
26°	6 0	6 0	5 56	6 4	5 52	6 8	5 48	6 12	5 44	6 16	5 42	6 18	5 40	6 20	
27°	6 0	6 0	5 56	6 4	5 52	6 8	5 48	6 12	5 44	6 16	5 41	6 19	5 39	6 21	
28°	6 0	6 0	5 56	6 4	5 51	6 9	5 47	6 13	5 43	6 17	5 41	6 19	5 38	6 22	
29°	6 0	6 0	5 56	6 4	5 51	6 9	5 47	6 13	5 42	6 18	5 40	6 20	5 38	6 22	1
30°	6 0	6 0	5 55	6 5	5 51	6 9	5 46	6 14	5 41	6 19	5 39	6 21	5 37	6 23	
31°	6 0	6 0	5 55	6 5	5 50	6 10	5 46	6 14	5 41	6 19	5 38	6 22	5 36	6 24	
32°	6 0	6 0	5 55	6 5	5 50	6 10	5 45	6 15	5 40	6 20	5 37	6 23	5 35	6 25	ĺ
330	6 0	6 0	5 55	6 5	5 50	6 10	5 44	6 16	5 39	6 21	5 36	6 24	5 34	6 26	
340	6 0	6 0	5 55	6 5	5 49	6 11	5 44	6 16	5 38	6 22	5 35	6 25	5 33	6 27	
35°	6 0	6 0	5 55	6 5	5 49	6 11	5 43	6 17	5 37	6 23	5 35	6 25	5 32	. 6 28	
36°	6 0	6 0	5 55	6 5	5 48	6 12	5 42	6 18	5 37	6 23	5 34	6 26	5 31	6 29	
370	6 0	6 0	5 55	6 5	5 48	6 12	5 42	6 18	5 36	6 24	5 33	6 27	5 29	6 31	
380	6 0	6 0	5 55	6 5	5 47	6 13	5 41	6 19	5 35	6 25	5 32	6 28	5 28	6 32	
390	6 0	6 0	5 55	6 5	5 47	6 13	5 40	6 20	5 34	6 26	5 31	6 29	5 27	6 33	
¥	sets	rises	sets	rises	sets	riscs	sets	rises	sets	riscs	scts	riscs	sets	riscs	
*	Sept.10 ≫→ Sept.26 ≫→ ≪ Mar. 17 ←≪ Mar. 13							Oct. 11 *** Feb. 27		Oct. 15 ≫ → ≪ Fcb. 24		Oct. 18 >>> 4		Đ.	
·, ·	0	0	2	,0	4		6		<u> </u>	0	9	0	10°		The second
	ŀ	SOUT						H DECLINATION.							

THE INDIAN CALENDAR.

TABLE G. (CONTINUED.)

APPARENT TIME OF THE SUN'S RISING AND SETTING.

N.B. On and after each date entered herein use the column to which it refers. The arrows indicate the order.

	,			herein 'n					AT10			ic the		
•	11	•	· 12	,0	13	0	14	0	15	,0	10)°	1	7°
Latitude. ≫→	Aŗr. 17 ← ⋘ A	»→ lug. 23	Λpr. 20) ≫ → Aug. 20	Apr. 23	l >>≻ Aug. 17	Apr. 20	3 >>> → Aug. 14	Apr. 29) ≫>- Aug. 10	May 3	≫-≻ Aug. 7	May 6	»→ Aug. :
	rises	scts	riscs	sets	riscs	scfs	rises	scls	rises	sets	riscs	sets	rises	scts
	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m
0°	6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 (
2°	5 59	6 1	5 58	6 2	5 58	6 2	5 58	6 2	5 58	6 2	5 58	6 2	5 58	6 5
4°	5 57	6 3	5 57	6 3	5 56	6 4	5 56	6 4	5 56	6 4	5 56	6 4	5 55	6
6°	5 56	6 4	5 55	6 5	5 55	6 5	5 54	6 6	5 54	6 6	5 53	6 7	5 53	6
8°	5 54	6 6	5 53	6 7	5 53	6 7	5 52	6 8	5 51	6 9	5 51	6 9	5 50	.6 1
0°	5 52	6 8	5 52	6 8	5 51	6 9	5 50	6 10	5 49	6 11	5 49	6 11	5 48	6 12
2°	5 51	6 9	5 50	6 10	5 49	6 11	5 48	6 12	5 47	6 13	5 46	6 14	5 45	6 1
4°	5 50	6 10	5 48	6 12	5 48	6 12	5 46	6 14	5 45	6 15	5 44	6 16	5 43	.6 1
6°	5 47	6 13	5 46	6 14	5 45	6 15	5 44	6 16	5 42	6 18	5 41	6 19	5 40	6 2
3°	5 46	6 14	5 44	6 16	5 43	6 17	5 41	6 19	5 40	6 20	5 39	6 21	5 37	.6 2
0°	5 44	6 16	5 42	6 18	5 41	6 19	5 39	6 21	5 38	6 22	5 36	6 24	5 34	6 2
1°	5 43	6 17	5 41	6 19	5 40	6 20	5 38	6 22	5 36	6 24	5 35	6 25	5 33	6 2
2°	5 42	6 18	5 40	6 20	5 39	6 21	5 37	6 23	5 35	6 25	5 33	6 27	5 32	.6 2
3°	5 41	6 19	5 39	6 21	5 38	6 22	5 36	6 24	5 34	6 26	5 32	6 28	5 30	6 3
To	5 40	6 20	5 38	6 22	5 36	6 24	5 34	6 26	5 33	6 27	5 31	6 29	5 29	6 3
5°	5 39	6 21	5 37	6 23	5 35	6 25	5 33	6 27	5 31	6 29	5 29	6 31	5 27	63
6°	5 38	6 22	5 36	6 24	5 34	6 26	5 32	6 28	5 30	6 30	5 28	6 32	5 26	6 3
7°	5 37	6 23	5 35	6 25	5 33	6 27	5 31	6 29	5 29	6 31	5 26	6 34	5 24	63
8°	5 36	6 24	5 34	6 26	5 32	6 28	5 30	6 30	5 27	6 33	5 25	6 35	5 23	6 3
9°	5 35	6 25	5 33	6 27	5 31	6 29	5 28	6 32	5 26	6 34	5 23	6 37	5 21	.63
80°	5 34	6 26	5 32	6 28	5 29	6 31	5 27	6 33	5 24	6 36	5 22	6 38	5 19	6 4
1°	5 33	6 27	5 31	6 29	5 28	6 32	5 26	6 34	5 23	6 37	5 20	6 40	5 18	6 4
20	5 32	6 28	5 29	6 31	5 27	6 33	5 24	6 36	5 21	6 39	5 19	6 41	5 16	.64
13°	5 31	6 29	5 28	6 32	5 26	6 34	5 23	6 37	5 20	6 40	5 17	6 43	5 14	6 4
340	5 30	6 30	5 27	6 33	5 24	6 36	5 2l	6 39	5 18	6 42	5 15	6 45	.5 12	. 6 4
35°	5 29	6 31	5 26	6 34	5 23	6 37	5 20	6 40	5 17	6 43	5 14	6,46	5 11	6 4
36°	5 28	6 32	5 24	6 36	5 21	6 39	5 18	6 42	5 15	6 45	5 12	6 48	.5 9	6 5
37°	5 26	6 34	5 23	6 37	5 20	6 40	5 17	6 43	5 13	6 47	5 10 .	6 50	5 7	6 5
38°	5 25	6 35	5 22	6 38	5 18	6 42	5 15	6 45	5 12	6 48	5 8	6 52	5 5	6 5
99°	5 24	6 36	5 20	6 40	5 17 6 43		5 13	6 47	5 10	6 50	5 6	6 54	5 3	65
	sets .	rises	sets	rises	sets rises		sets	rises	s sets rises		sets rises		sets	rise
		l ≫ → Feb. 19		3 >> → Feb. 16	000.20			Nov. 1 ≫→ —— Feb. 7				Nov. 8	≫ Jan. 3	
· .	: 11	l°	1:	2°	13° - 14° -				150 160			17°		
					S	TTUO	TH DECLINATION.						·	

TABLE G. (CONTINUED.)

APPARENT TIME OF THE SUN'S RISING AND SETTING.

N.B. On and after each date entered herein use the column to which it refers. The arrows indicate the order.

$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	·	•	NORTH DECLINATION.												
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		18	0	19	, ·	20)0	· 21	٥	22	,0	23	, °	- 231	/2°
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25°	23°	5 28	6 32	5 26	6 34	5 24	6 36	5 22	6 38	5 21	6 39	5 19	6.41	5 18	6 42
26°	24°	5 27	6 33	5 25	6 35	5 23	6 37	5 21	6 39	5 19	6 41	5 16	6 44	3 15	6 45
27°	25°	5 25	6 35	5 23	6 37	5 21	6 39	5 19	6 41	5 17	6 43	5 14	6 46	5 13	6 47
28°		5 24	6 36	5 21	6 39	5 19	6 41	5 17	6 43	5 15	6 45	5 12	6 48	5.11	6 49
29° 5 18 6 42 5 16 6 44 5 13 6 47 5 11 6 49 5 8 6 52 5 6 6 54 5 4 6 56 30° 5 17 6 43 5 14 6 46 5 11 6 49 5 9 6 51 5 6 6 54 5 3 6 57 5 2 6 58 31° 5 13 6 45 5 12 6 48 5 9 6 51 5 7 6 53 5 4 6 56 5 1 6 59 5 0 7 0 32° 5 13 6 47 5 10 6 50 5 7 6 53 5 4 6 56 5 2 6 58 4 59 7 1 4 56 7 4 4 55 7 5 34° 5 11 6 49 5 8 6 52 5 5 6 55 5 2 6 58 4 59 7 1 4 56 7 4 4 55 7 5 34° 5 9 6 51 5 6 6 54 5 3 6 57 5 0 7 0 4 57 7 3 4 53 7 7 4 50 7 11 36° 5 7 6 53 5 4 6 56 5 1 6 59 4 58 7 2 4 53 7 7 4 50 7 11 4 4 45 7 15 4 44 7 16 38° 5 1 6 59 4 58 7 2 4 53 7 7 4 50 7 10 4 46 7 14 4 43 7 17 4 41 7 19 39° 4 59 7 1 4 55 7 5 4 51 7 9 4 48 7 12 4 44 7 16 4 40 7 20 4 38 7 22 Nov. 11 → Correct Jan. 27 Correct Jan. 23 Correct Jan. 18 Correct Jan. 18 Correct Jan. 28 Correct Jan. 18 Correct Jan. 18 Correct Jan. 28 Correct Jan. 28 Correct Jan. 18 Correct Jan. 18 Correct Jan. 28 Correct Jan. 28 Correct Jan. 28 Correct Jan. 18 Correct Jan. 28 Correct Jan. 28 Correct Jan. 18 Correct Jan. 28		5 22	6 38	5 20	6 40	5 17	6 43	5 15	ั 6 45	5 12	6 48	5 10	6 50	5 9	6 51
30° 5 17 6 43 5 14 6 46 5 11 6 49 5 9 6 51 5 6 6 54 5 3 6 57 5 2 6 58 31° 5 15 6 45 5 12 6 48 5 9 6 51 5 7 6 53 5 4 6 56 5 1 6 59 5 0 7 0 32° 5 13 6 47 5 10 6 50 5 7 6 53 5 4 6 56 5 2 6 58 4 59 7 1 4 57 7 3 33° 5 11 6 49 5 8 6 52 5 5 6 55 5 2 6 58 4 59 7 1 4 56 7 4 4 55 7 5 34° 5 9 6 51 5 6 6 54 5 3 6 57 5 0 7 0 4 57 7 3 4 53 7 7 4 52 7 8 35° 5 7 6 53 5 4 6 56 5 1 6 59 4 58 7 2 4 54 7 6 4 51 7 9 4 49 7 11 36° 5 5 5 6 55 5 2 6 58 4 59 7 1 4 4 5 7 15 4 44 7 16 38° 5 1 6 59 4 58 7 2 4 53 7 7 4 50 7 10 4 46 7 14 4 43 7 17 4 41 7 10 39° 4 59 7 1 4 55 7 5 4 51 7 9 4 48 7 12 4 44 7 16 4 40 7 20 4 38 7 22 Sets rises sets		5 20	6 40	5 18	6 42	5 15	_	•	6 47	5 10	6 50	5 .8	6 52	5 7	6 53
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32° 5 13 6 47 5 10 6 50 5 7 6 53 5 4 6 56 5 2 6 58 4 59 7 1 4 57 7 3 33° 5 11 6 49 5 8 6 52 5 5 6 55 5 2 6 58 4 59 7 1 4 56 7 4 4 55 7 5 34° 5 9 6 51 5 6 6 54 5 3 6 57 5 0 7 0 4 57 7 3 4 53 7 7 4 52 7 8 35° 5 7 6 53 5 4 6 56 5 1 6 59 4 58 7 2 4 54 7 6 4 51 7 9 4 49 7 11 36° 5 5 6 55 5 2 6 58 4 59 7 1 4 45 7 15 4 44 7 16 38° 5 1 6 59 4 58 7 2 4 53 7 7 4 50 7 10 4 46 7 14 4 43 7 17 4 41 7 19 39° 4 59 7 1 4 55 7 5 4 51 7 9 4 48 7 12 4 44 7 16 4 40 7 20 4 38 7 22		5 17	6 43	5 14	6 46	5 11	6 49	5 9	6 51	5 6	1	5 3	ſ	5 2	
33° 5 11 6 49 5 8 6 52 5 5 6 55 5 2 6 58 4 59 7 1 4 56 7 4 4 55 7 5 34° 5 9 6 51 5 6 6 54 5 3 6 57 5 0 7 0 4 57 7 3 4 53 7 7 4 52 7 8 35° 5 7 6 53 5 4 6 56 5 1 6 59 4 58 7 2 4 54 7 6 4 51 7 9 4 49 7 11 36° 5 5 6 55 5 2 6 58 4 59 7 1 4 55 7 5 4 52 7 8 4 48 7 12 4 46 7 14 37° 5 3 6 58 5 0 7 0 4 56 7 4 4 53 7 7 4 49 7 11 4 45 7 15 4 44 7 16 38° 5 1 6 59 4 58 7 2 4 53 7 7 4 50 7 10 4 46 7 14 4 43 7 17 4 41 7 19 39° 4 59 7 1 4 55 7 5 4 51 7 9 4 48 7 12 4 46 7 20 4 38 7 22			6 45	5 12	6 48	5 9	6 51	5 7	6 53	5 4	6 56	5 1	6 59	}	
34° 5 9 6 51 5 6 6 54 5 3 6 57 5 0 7 0 4 57 7 3 4 53 7 7 4 52 7 8 35° 5 7 6 53 5 4 6 56 5 1 6 59 4 58 7 2 4 54 7 6 4 51 7 9 4 49 7 11 36° 5 5 6 55 5 2 6 58 4 59 7 1 4 55 7 5 4 52 7 8 4 48 7 12 4 46 7 14 37° 5 3 6 58 5 0 7 0 4 56 7 4 4 53 7 7 4 49 7 11 4 45 7 15 4 44 7 16 38° 5 1 6 59 4 58 7 2 4 53 7 7 4 50 7 10 4 46 7 14 4 43 7 17 4 41 7 10 39° 4 59 7 1 4 55 7 5 4 51 7 9 4 48 7 12 4 44 7 16 4 40 7 20 4 38 7 22 sets rises Nov.11 → Nov.15 → Nov.15 → Nov.19 → Nov.24 → Nov.29 → Dec. 6 → Dec. 29 18° 19° 20° 21° 22° 23° 23° 231/2°		5 13	6 47	5 10	6 50	5 7		5 4	(-	5 2	!	1	1		
35° 5 7 6 53 5 4 6 56 5 1 6 59 4 58 7 2 4 54 7 6 4 51 7 9 4 49 7 11 36° 5 5 6 55 5 2 6 58 4 50 7 1 4 55 7 5 4 52 7 8 4 48 7 12 4 46 7 14 37° 5 3 6 58 5 0 7 0 4 56 7 4 4 53 7 7 4 49 7 11 4 45 7 15 4 44 7 16 38° 5 1 6 59 4 58 7 2 4 53 7 7 4 50 7 10 4 46 7 14 4 43 7 17 4 41 7 19 39° 4 59 7 1 4 55 7 5 4 51 7 9 4 48 7 12 4 44 7 16 4 40 7 20 4 38 7 22 sets rises Nov. 11 >>> Nov. 15 >>> Nov. 15 >>> Nov. 19 >>> Nov. 24 >>> Nov. 29 >>> Dec. 6 >>> Dec. 15 >>> Cov. 29 Cov. 21° 22° 23° 23° 231/2°		5 11	6 49	5 8	6 52	5 5	6 55		6 58	4 59	7 1	ł	1	1	•
36°		5 9	6 51	5 6	6 54	5 3		5 0	7 0		7 3	ł]		•
37° 5 3 6 58 5 0 7 0 4 56 7 4 4 53 7 7 4 49 7 11 4 45 7 15 4 44 7 16 38° 5 1 6 59 4 58 7 2 4 53 7 7 4 50 7 10 4 46 7 14 4 43 7 17 4 41 7 19 39° 4 59 7 1 4 55 7 5 4 51 7 9 4 48 7 12 4 44 7 16 4 40 7 20 4 38 7 22 sets rises Nov. 11 ≫ → Nov. 15 ≫ → Nov. 19 ≫ → Nov. 24 ≫ → Nov. 29 ≫ → C ⊕ Dec. 29 18° 19° 20° 21° 22° 23° 231/2°		5 7	6 53	5 4		l	ţ	(l			l		
38°				5 2		1]	1)			i			
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Nov. 11 Nov. 15 Nov. 19 Nov. 24 Nov. 29 Dec. 6 Dec. 15 Nov. 29 Oec.	ชทุว					4 51	7 9	4 48	7 12	4 44	7 16				
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	→													Dec. 15	**
SOUTH DECLINATION.	,	18	30	19)°	20° 21°				22	,0	23.0		231/20	
						8	OUTI	DEC	CLIN	AT10	N.				

THE INDIAN CALENDAR.

TABLE H.

ECLIPSES BY NAUTICAL ALMANACK RECKONING.

A. D.	Time mea		Lanka mean s 6 A. M.	unrise,	
Year, Month, and Day.	nir	ng of Roy	Period of all obscuration.	End of	
		ni ni	ng.	Eclipse.	
1	3	4	5 6	7	
1768 Jan. 4 1768 June 30	$\begin{bmatrix} 3 & 32 & 2 \\ 2 & 53 & 1 \end{bmatrix}$	26 2	18 3 27	4 37 4 40	·
1768 Dec. 23 1769 June 19 1769 Dec. 13	14 10 12 	•	•	15 58	
1771 Apr. 29 1771 Oct. 23	$\begin{array}{ c c c c c } 1 & 12 & 0 \\ 15 & 33 & 14 \end{array}$		= =	2 19 16 43	
1772 Apr. 17 1772 Oct. 11 1773 Apr. 7 1773 Sept. 30 1775 Feb. 15	15 9 13 16 17 14 7 46 6 16 56 15 14 14 12	19 15 23 - 25 -	19 15 59 25 17 9 	16 56 18 15 9 8 18 26 15 38	
1775 Aug. 11	$ \begin{vmatrix} 6 & 19 & 4 \\ 13 & 32 & 11 \\ 23 & 5 & 21 \\ 15 & 27 & 14 \\ 11 & 51 & 11 \end{vmatrix} $	$egin{array}{c c c} 33 & 12 \\ 19 & 22 \\ 4 & 2 & - \end{array}$	38 14 25 18 23 53	7 48 15 30 24 52 16 51 12 27	
1778 Dec. 4	4 31 3 2 3 3 5 5 18 48 10 1 3 21 1	2 2 3 58 17	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		·
1782 Mar. 29. 1782 Sept. 21. 1783 Mar. 18. 1783 Sept. 10. 1784 Mar. 7.	7 26 0 13 20 12 20 34 18 22 35 20 2 42 1	$egin{array}{c cccc} 2 & 16 & & & \\ 6 & 42 & 19 & & \\ 0 & 44 & 21 & & \\ \end{array}$	$egin{array}{c cccc} - & - & - \ & 43 & 21 & 25 \ & 44 & 23 & 20 \ - & & - & \end{array}$		
1784 Aug. 30. 1786 Jan. 14. 1786 July 11. 1787 Jan. 3. 1787 June 30.	13 48 12 11 57 10 9 49 8 22 56 2 13 35 13	$\begin{bmatrix} 6 & 4 & 9 \\ 1 & 8 & 22 \end{bmatrix}$		24 43	
1787 Dec. 24	14 10 19 23 19 23 3 22 23 42 23	$egin{array}{ccccc} 7 & 27 & & & & \\ 2 & 15 & & & & \\ 1 & 16 & 22 & & & \end{array}$	14 23 51 51 24 34		
1791 Apr. 18 1791 Oct. 11 1793 Feb. 25 1793 Aug. 21 1794 Feb. 14	15 44 1. 24 26 2. 22 1 2 13 59 1. 21 24 1.	0 40 2 35	31 22 17	17 11 26 1 23 23 15 23 23 22	

TABLE H. (CONTINUED.)

ECLIPSES BY NAUTICAL ALMANACK RECKONING.

4	Time measured	from Laul	a mean s		s more reliable than the Nautical Almanack.
A. D. Year, Month,	Regin	taken as 6 A.			
and Day.	Greatest ning of phase. Eclipse.	Eclinee Begin-		End of Eclipse.	
1.	3 4			7	
1794 Aug. 11 1795 Feb. 3 1795 July 31 1796 Dec. 14 1797 June 9	6 32 4 44 23 42 22 16 18 51 17 56 13 19 12 7 10 32 8 43	5 42 - - 10 0	7 22 —	8 19 25 8 19 47 14 32 12 21	•
1797 Dec. 4	3 21 1 31 17 10 15 27 11 28 9 59 15 28 14 11 20 48 19 53	2 30 16 45 —	4 11 17 35 — — —	5 11 18 53 12 56 16 46 21 43	
1801 Mar. 30 1801 Sept. 22 1802 Mar. 19 1802 Sept. 11 1804 Jan. 26	4 27 2 35 6 21 4 32 10 17 9 1 21 39 20 13 20 23 19 13	3 35 5 32 — —	5 19 7 10 — —	6 19 8 10 11 34 23 5 21 32	
1804 July 22	16 40 15 1 7 43 5 55 20 7 18 12 23 3 21 37 15 51 15 8	6 53 19 22 —	8 32 20 52 —	18 19 9 30 22 2 24 29 16 34	
1807 Nov. 15	$ \begin{vmatrix} 7 & 12 & 6 & 11 \\ 6 & 40 & 4 & 55 \\ 7 & 16 & 5 & 19 \\ 23 & 42 & 22 & 11 \\ 8 & 5 & 6 & 28 \end{vmatrix} $	5 53 6 26 —	7 27 8 5 —	8 13 8 25 9 12 25 12 9 42	
1811 Mar. 10	5 41 4 24 21 45 20 26 5 8 3 10 14 4 12 15 7 54 6 28	- 4 16 13 13 -	$ \begin{vmatrix} \\ 6 & 0 \\ 14 & 55 \\ \end{vmatrix} $	6 58 23 3 7 6 15 53 9 20	
1813 Aug. 12	$ \begin{vmatrix} 1 & 56 & 0 & 49 \\ 22 & 11 & 21 & 0 \\ 17 & 9 & 15 & 25 \\ 11 & 58 & 10 & 10 \\ 24 & 17 & 22 & 32 \end{vmatrix} $	$ \begin{array}{c cccc} & - & \\ & - & \\ & 17 & 2 \\ & 11 & 9 \\ & 23 & 41 \\ \end{array} $	- 17 16 12 47 24 53	3 3 23 22 18 53 13 46 26 3	
1816 Dec. 4	19 38 18 9 23 23 22 13 4 28 3 42 12 11 10 20 14 16 12 28	11 20 13 28	$ \begin{vmatrix} - \\ - \\ 13 & 2 \\ 15 & 4 \end{vmatrix} $	21 8 24 34 5 14 14 2 16 4	
1820 Mar. 29	17 46 16 25 5 38 4 9 4 46 3 38 23 30 21 58 16 28 14 41		- - 17 17	19 7 7 6 5 54 25 2 18 14	

TABLE H. (CONTINUED.)

ECLIPSES BY NAUTICAL ALMANACK RECKONING.

	A. D.	Т	ime	measv		from Lauk n as 6 A.		nn ri se	,	
	r, Month, nd Day.	Grea	test	Beg ning	ļ	Perio	od of euration.	E	1	
		phase.		Ecli	- 1	Begin- ning.	End.	. Ecli		
	1	3		4	:	5	6	*7		
1824 Jan 1824 Jul 1825 Ma	ly 23	2 7 3 23 15	35 57 18 9 12	0 6 2 22 14	39 31 34 54 15	1 46 — — —	3 25 — — — —	4 9 4 23 16	31 22 2 23 9	
1826 No 1827 Ma 1827 No	ay 21	14 14 7 15 13	18 59 19 57	12 13 5 14 12	35 46 19 0	13 35 14 11 * —	15 1 15 47 * 	16 16 8 17 14	1 55 53 35 23	* The Nautical Almanack gives the celipse as no quite total the digits celipsed being 11° 471/2'.
1830 Ma 1830 Se 1831 Fe	pt2	5 12 21 15	36 46 41 59	10 19 14 7	24 49 53 30 47	11 54 20 51 —	13 38 22 31 —	6 14 23 17 10	48 43 29 27 19	
1834 Ju		7 23 20 7 3	2 45 35 23 51	22 18 5 2	52 7 46 35 22	19 46 6 40	21 24 8 5	8 25 22 9 5	13 23 24 10 20	
1836 M 1836 Oc 1837 A ₁	ane 10	21 7 12 19 22	39 9 17 44 20	21 6 11 17 20	10 7 41 53 34	18 54 21 34	$\begin{bmatrix} - \\ - \\ 20 & 34 \\ 23 & 6 \end{bmatrix}$	22 8 12 21 24	7 12 53 35 6	
1838 Oc 1840 Fo 1840 Au	pr. 9 ct. 3 eb. 17 ug. 13 eb. 5	25 13 13 6 25	2 44 5 26 10	23 12 11 5 23	35 13 59 1 23	24 21		26 15 14 7 26	28 15 11 51 56	
1842 Ja 1842 Ja 1843 D	ng. 2	9 16 9 23 21	4 47 50 14 53	7 15 8 22 20	7 21 48 21 12	8 12 — — 21 15	9 56 22 31	11 18 10 24 23	1 13 53 7 34	·
1845 M 1845 N 1847 M	ov. 24	22 14 23 20 13	48 57 52 29 36	20 13 22 19 12	53 20 13 26 30	22 1 14 34 — —	23 34 15 20 — — —	24 16 25 21 14	42 34 31 32 43	
1848 Sc 1849 M 1849 Sc	ept. 19	20 5 23 16 15	15 22 58 13 53	18 3 22 14 14	19 34 28 50 43	19 24 4 33 — —	21 6 6 11 —	22 7 25 17 17	11 10 28 36 3	

TABLE H. (CONTINUED.)

ECLIPSES BY NAUTICAL ALMANACK RECKONING.

A. D.		neasured	from Laûk n as 6 A.	a mean si		is more reliable than the Nautical Almanack.
Year, Month,		Begin- ning of		od of curation.	End of	
1	3	Eclipse.	ning. 5	End.	Eclipse.	
					<u> </u>	
1851 July 13 1852 Jan. 7 1852 July 1 1852 Dec. 26 1853 June 21	1 .	4 53 3 24 12 40 10 36 4 16	4 24 13 41 —	6 2 15 16 —	7 55 7 2 16 17 13 35 5 53	
1854 May 12 1854 Nov. 4 1855 May 2 1855 Oct. 25 1856 Apr. 20		13 56 19 48 1 17 4 47 6 37	2 20 5 48	3 56 7 16	15 41 20 42 4 59 8 18 9 42	
1856 Oct. 13 1858 Feb. 27 1858 Aug. 24 1859 Feb. 17 1859 Aug. 13	21 17 13 23 9 46	20 24 20 13 12 7 8 0 13 39	S 58 14 41	10 34 16 30	23 30 22 20 14 40 11 32 17 35	* The Nautical almanack gives this as not quite total, the digits eclipsed being 0.994.
1860 Feb. 6† 1860 Aug. 1 1861 Dec. 17 1862 June 12 1862 Dec. 6	25 32 16 25 7 21 5 24 6 43	24 5 15 11 6 30 3 45 4 49	- - 4 53 5 58	- 5 55 7 29	26 59 17 41 S 12 7 3 S 38	† The day is really the 7th (1.32, etc.). The entry of the sixth is retained for comparison with Table E.
1863 June 1	7 59 3 41	20 49 6 19 2 48 20 42 1 41	21 56 -	23 2 — — 4 25	24 9 9 39 4 34 22 44 5 31	
1866 Sept. 24. 1867 Mar. 20. 1867 Sept. 13. 1869 Jan. 27. 1869 July 23.	24 41	11 23 6 19 22 0 25 32 11 43	12 22	13 58	14 57 9 25 24 58 25 50 14 28	
1870 Jan. 17. 1870 July 12. 1871 Jan. 6. 1871 July 2. 1872 May 22.	21 37 20 19	12 0 19 47 18 49 11 29 21 44	13 0 20 47 —	14 3S 22 27 — —	15 38 23 27 21 49 13 32 22 59	
1872 Nov. 15. 1873 May 12. 1873 Nov. 4. 1874 May 1. 1874 Oet. 25.	4 22 10 23 14 54 15 6 6 19	4 5 8 33 13 10 13 28 4 45	9 38 14 11 6 3	11 8 15 37 6 36	4 40 12 13 16 38 16 44 7 54	
1876 Mar. 10. 1876 Sept. 3. 1877 Feb. 27. 1877 Aug. 23. 1878 Feb. 17.	5 24 20 25 18 18 22 14 10 14	4 24 19 18 16 33 20 17 8 46	17 30 21 22	19 6 23 7	6 24 21 32 20 4 24 12 11 42	

TABLE H. (CONTINUED)

ECLIPSES BY NAUTICAL ALMANACK RECKONING.

N.B. It is prob		measured	from Laul	a mean s		is more reliable than the Nautical Almanack.
Year, Month, and Day.	Greatest	Begin-		od of scuration.	End of	
	Phase.	Eclipse.	ning.	End.	Eclipse.	
1	3	4	5	6	7	
1878 Aug. 12 1879 Dec. 28 1880 June 22 1880 Dec. 16 1881 June 12	28 11 15 29 12 53 14 42 5 56	21 46 14 40 11 18 12 48 4 14	- 12 34 13 57 5 17	- 13 12 15 27 6 36	24 · 37 16 18 14 28 16 36 7 39	
1881 Dec. 5 1883 Apr. 22 1883 Oct. 16 1884 Apr. 10 1884 Oct. 4	16 11 10 42 5 57 10 50 21 5	14 31 10 6 5 2 8 56 19 18	-* - 10 3 20 19	_* _ _ 11 36 21 51	17 52 11 17 6 53 12 44 22 52	* The Nautical Almanack makes this eclipse just short of total.
1885 Mar. 30	15 37 6 51 9 25 19 52 22 23	14 2 5 18 8 17 18 39 20 34	21 34	23 12	17 13 8 25 10 33 21 5 24 12	
1888 July 23 1889 Jan. 17 1889 July 12 1890 June 3 1890 Nov. 26	4 48 4 33 19 57 † 12 37	2 58 3 2 18 46 † 12 32	3 57 - + -	5 39 - † -	6 38 6 4 21 8 12 42	† The Canon gives a very small celipse. The Nautical Almanack and Connaissance des Temps, none.
1891 May 23 1891 Nov. 15 1892 May 11 1892 Nov. 4 1894 Mar. 21	17 32 23 22 21 56 14 48 13 24	15 44 21 38 20 13 13 12 12 29	16 52 22 40 — 14 24	18 12 24 4 — 15 12	19 20 25 6 23 40 16 24 14 18	
1894 Sept. 15 1895 Mar. 11 1895 Sept. 4 1896 Feb. 28 1896 Aug. 23	3 35 2 42 5 0 18 49 6 0	2 39 0 57 3 3 17 19 4 27	1 55 4 10 —	3 30 5 50 —	4 30 4 28 6 57 20 19 7 33	
1898 Jan. 7	23 38 20 21 22 45 13 21 24 29	22 50 18 49 20 51 11 36 22 48	22 0 12 36 —§		24 25 21 52 24 39 15 6 26 10	§ The Nautical Almanack makes this Eclipse just
1900 June 13	2 31	2 27		_	2、34	Short of Louis.
	,					

2)	
0.4·	
	G.